LUFTWAFFE COLOURS

CLASSIC COLOURS

SCHLACHTFLIEGER

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LUFTWAFFE GROUND-ATTACK UNITS 1937-1945

SCHLACHTFLIEGER

A comprehensive study of the Luftwaffe's ground-attack units between 1937-1945. Subjects include:

- Early operations
- The Spanish Civil War
- 'Tip and Run' against England
- The Eastern Front
- North Africa
- The Far North
- Sonderstaffel Einhorn
- Kommando Schenck
- Italy
- The Western Front
- The Nachtschlachtgruppen
- The Panzerjagdstaffeln

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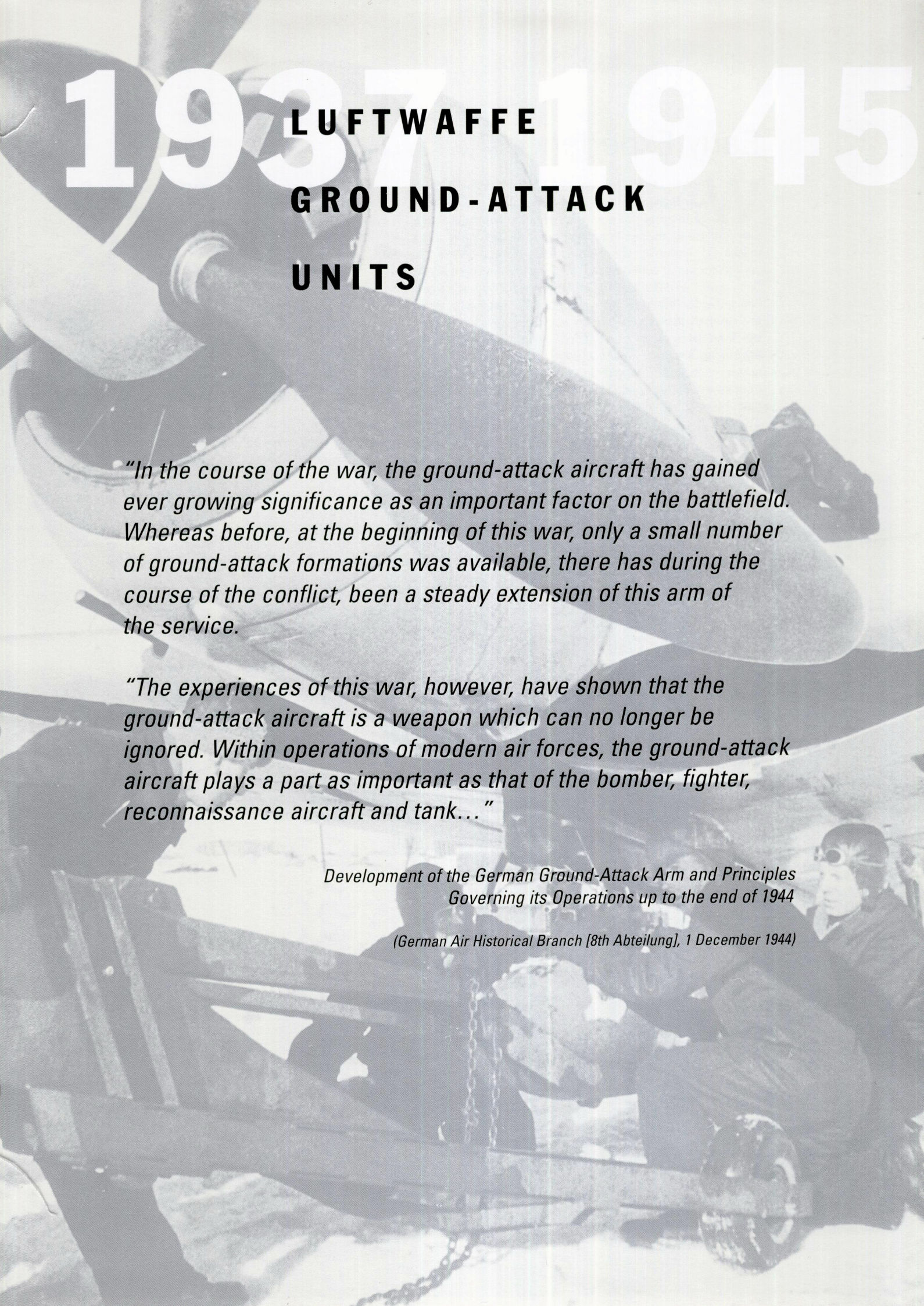


1937 1945

LUFTWAFFE GROUND-ATTACK UNITS

"In the course of the war, the ground-attack aircraft has gained ever growing significance as an important factor on the battlefield. Whereas before, at the beginning of this war, only a small number of ground-attack formations was available, there has during the course of the conflict, been a steady extension of this arm of the service.

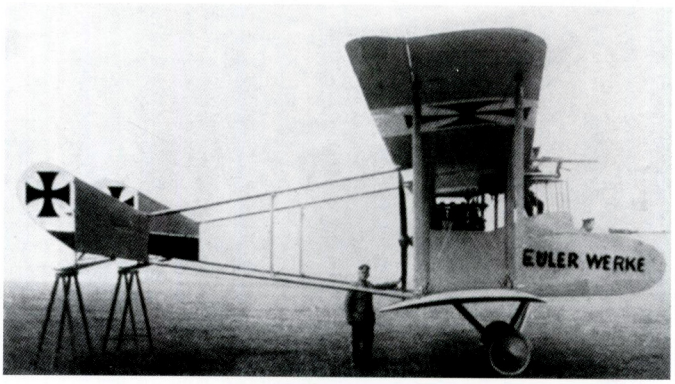
"The experiences of this war, however, have shown that the ground-attack aircraft is a weapon which can no longer be ignored. Within operations of modern air forces, the ground-attack aircraft plays a part as important as that of the bomber, fighter, reconnaissance aircraft and tank..."

Development of the German Ground-Attack Arm and Principles Governing its Operations up to the end of 1944

(German Air Historical Branch [8th Abteilung], 1 December 1944)

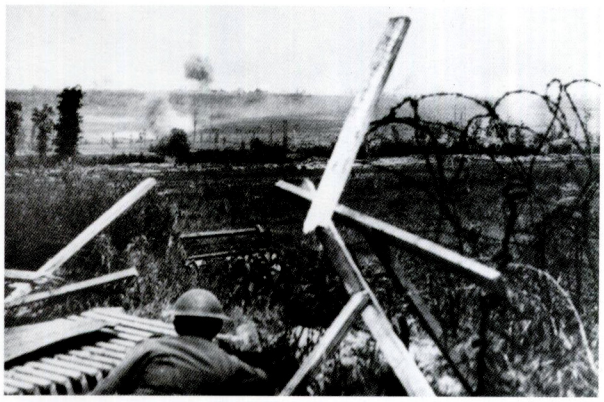
Early Experiences by J. Richard Smith

When the First World War broke out in August 1914, few high-ranking staff officers had a precise view of the role the aeroplane should undertake. Many did not trust those 'magnificent men in their flying machines'. However, some aeroplanes were pressed into service for aerial observation, like a sort of moving balloon. Such was the mistrust that each important report usually had to be confirmed by a cavalry platoon. Frequently, Allied and German observation aircraft would pass each other over the front lines when carrying out such missions. At the beginning aircrews saluted each other but, one day, someone thought it would be good to prevent the enemy from spying on his lines. The fighter was born. At the same time, other pilots imagined that aeroplanes could also carry something heavier and more lethal than a camera. The bomber came into being. There was, however, a mix between a fighter and a bomber that had still to be invented, faster than a bomber but more heavily armed than a fighter.



One of the earliest roles proposed for the aeroplane was that of 'airship destroyer'. This machine was developed by August Euler in 1914. It was armed with two flexible machine guns.

In 1916 fighters were used to strafe trenches on both sides but these missions were more a question of circumstance than a concerted strategy. During the Messines offensive of June 1917, British troops were supported by fighter aircraft, such support becoming established practice as time went by. During the first great tank attack at Cambrai in November 1917, a considerable number of bomb-carrying D.H.5s and Sopwith Camels supported the offensive. But these aircraft were only fighters modified to carry bombs and they had to rely on their speed and manoeuvrability to survive.



A view across the Douvre Valley taken during the battle for Messines Ridge, a preliminary phase of the Third Battle of Ypres in the summer of 1917.

The first dedicated aircraft

In 1917, the Germans began to use low-flying reconnaissance C-types not only to collect information but also to attack targets of opportunity. Lighter, faster and more flexible CL types, such as the Halberstadt CL.II, were issued to the newly formed *Schutzstaffeln* (or protection squadrons) in the second half of the year. In November 1917, the *Schutzstaffeln* were reorganised into *Schlachtstaffeln* and took a very successful part in the Battle of Cambrai.

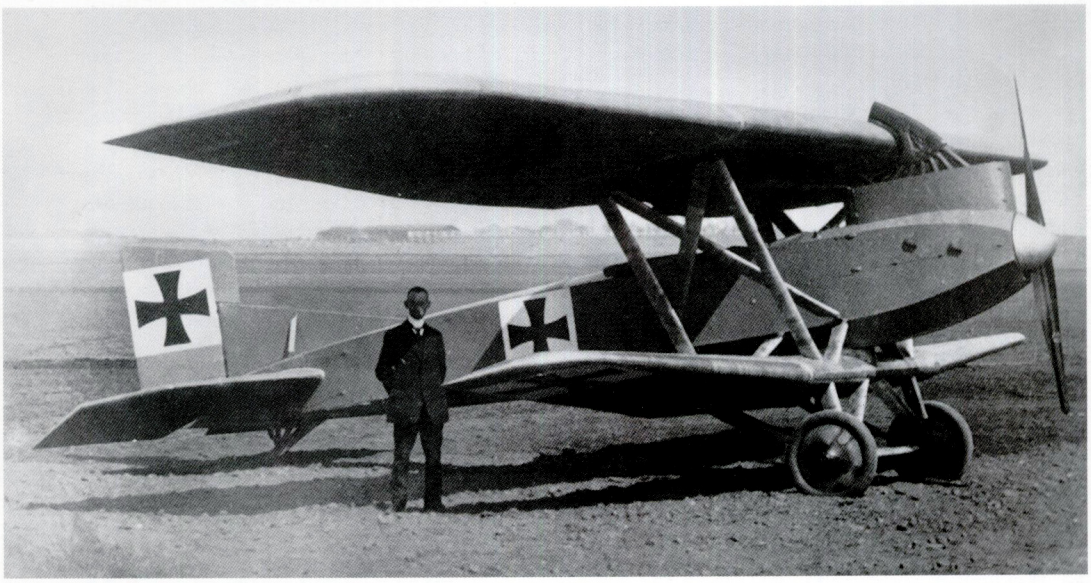
The Germans pushed ahead their thoughts on this new style of warfare. In March 1918 they decided to mount an all-out offensive to bring a quick and hopefully successful conclusion to the war. Over 730 aircraft, one-third of total German aviation strength, were to support the offensive. Among them was a handful of

The Halberstadt CL.II was designed as an escort fighter for the slower and more vulnerable 'C' type reconnaissance aircraft. However, as the German High Command began to realise the importance of close support for its ground troops, the CL.II specialised in this role, initially organised into Schutzstaffeln and later Schlachtstaffeln.

Junkers J.I sesquiplanes. The J.I can be considered the first aircraft in the world to be designed with the exclusive role of ground-attack. Nicknamed the 'furniture van', it was of all-metal construction with 5mm steel armour plates protecting the crew of two and the engine. This was a tough bird to destroy, almost as fast as a fighter and well armed, and was 15 years ahead of its time. The March 1918 offensive also saw the first anti-tank mission when a column of British tanks was halted by a *Jagdstaffel*.

The Germans later went further by issuing a specification for a single-seat attack aircraft (*Panzer-Einsitzer*) which could combine both fighter and ground-attack duties. AEG built the DJ.I, a biplane with fabric-covered wings and an all-metal fuselage, but war ended before the test programme had been completed.

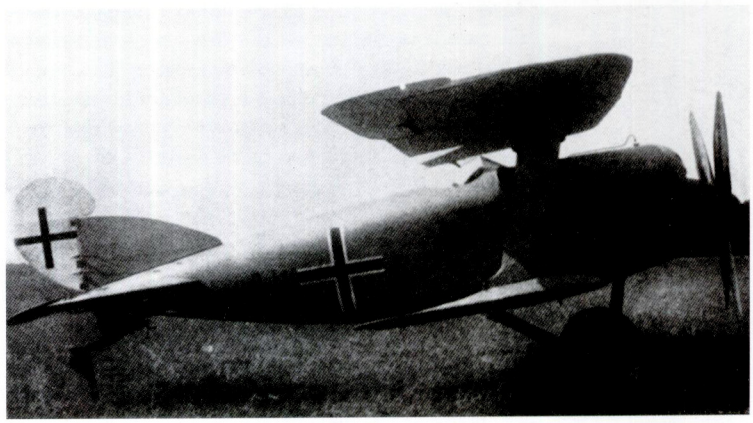
Typical of the forces that were to be attacked by German ground-attack aircraft during the First World War were these British troops ensconced behind an improvised road block during the battle of the Lys on 29 April 1918.



The Junkers J.I was the first aircraft in the world designed for the role of specialised close-support. It was a two-seater built of metal and featured a 5 mm armoured nose section which protected both engine and crew. The type entered service towards the end of 1917 and its strong construction proved extremely popular with its crews.

Level Bombing - A dead-end job

The concept of the specialised ground-attack aircraft was purely German, the Allies relying on their classic bombers and fighters, thus suffering heavy losses. It was no wonder that the Germans kept on thinking of how to improve the concept after the war, even though the Treaty of Versailles forbid them to have a military air arm. The future generals, who would eventually form the new *Luftwaffe* High Command when Hitler decided unilaterally to rearm Germany in 1935, had to think of what form a new conflict would take.

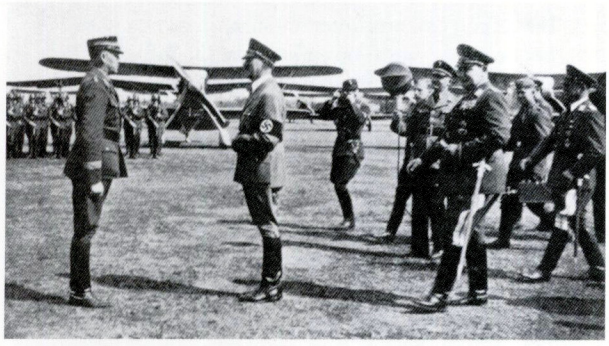


The AEG DJ.I was a specialised single-seat ground-attack aircraft which was extremely strong and had sheet aluminium fuselage skinning. Powered by a 195 hp Benz Bz IIIb engine, the aircraft made its first flight in September 1918 but was too late to enter operational service before the end of the First World War.

Many belligerents, suffering from amnesia, forgot all the lessons of 1918 and became more attracted by the new concept of strategic bombing devised by theoreticians like Trenchard, Mitchell and Douhet. 'The bomber will always get through' was the new motto for air strategists in the Twenties and most of the Thirties. This seemed to be a more economical way of making war. Furthermore, Western democracies, which had been disheartened by the waste of so many young men, pledged for disarmament and naively thought that this war had put an end to all wars.

After 1918 a drastic cut was made in the strength and budget of all air forces because money was more urgently needed elsewhere. The first to suffer from the axe were specialised aircraft, emphasis being put on multi-purpose aircraft for economical reasons. The appearance of tanks on the battlefield also changed the face of warfare. Attack aircraft would now need heavy armament and cannon to pierce armour. But in the twenties aircraft were neither robust enough nor had a powerful enough engine to carry more than one 20mm cannon while still offering reasonable performance. British and French governments were more concerned by uprisings in their colonies than a possible new world war, and light 'Jack-of-all-trades' aircraft were exactly what were needed as they were not supposed to operate in a highly hostile environment.

In Germany things were quite different. For those who had read '*Mein Kampf*' the future target was easy to pinpoint. Though the first Chief-of-Staff of the fledgling *Luftwaffe*, *General* Walther Wever, was interested



On 20 April 1935 one of the new Luftwaffe's first fighter units, Jagdgeschwader 134, received the honorary title 'Horst Wessel' named after a hero in Nazi folk law. Here Adolf Hitler talks to a Nazi Party official during the ceremony while the rotund figure of Hermann Göring looks on. At this time the unit was equipped with the He 51 biplane, a fighter which would prove outmoded in Spain but would demonstrate the theory of specialised ground attack and close support for the army.

enough in strategic bombing to launch the 'Ural Bomber' programme, he was well aware that an eventual war would be a continental conflict. What would be the use of dropping bombs on Paris, London, Warsaw and even Moscow if in the meantime Allied armies had overrun the Rhineland and were marching towards Berlin? With Germany surrounded by hostile or potentially hostile countries, the staff had to build up a tactical aerial weapon and also take into consideration the fact that Germany could be subject to pre-emptive strikes.

When it came into being in 1935, the *Luftwaffe* incorporated many high-ranking Army officers, many of them having had headquarters jobs during the First World War. This combination of former Army and Air Force officers in the *Luftwaffe* led to better inter-arm relationships than in any other country where rivalry and jealousy were the name of the game. The Supreme Commander of the *Luftwaffe*, Hermann Göring, had a position in the *Nazi* hierarchy that denied any political attack on the Air Force, which had also nothing to fear from the *Kriegsmarine*, the weakest component of the German armed forces. Thus, the *Luftwaffe* High Command had no need of a specific doctrine to justify its existence and, due to the military past of many of its officers, became receptive to all requirements issued by the *Wehrmacht*.

These were the reasons why, when in utmost secrecy, the first steps were made to rebuild an air force, development of ground-attack aircraft was top of the list. Research was undertaken in two directions: pure ground-attack aircraft and dive-bombers.

The early tank battles of 1917 had convinced the German High Command that armoured vehicles would be the spearhead of any future offensive and also that they would be the most difficult to combat. The value of aircraft equipped with machine guns and light bombs was questionable at the least. Level bombing was not considered accurate enough to disable, let alone destroy, such tiny and fast moving targets. It would also be ineffective against supply targets behind enemy lines. Dive-bombing was regarded as the best solution and, for the time being, the concept of the *Schlachtflugzeug* was simply abandoned.

Ernst Udet was the second highest scoring German fighter pilot at the end of the First World War. Following the end of that conflict he became a superb aerobatic pilot giving shows all over Europe. His interest in the dive bomber was eventually to pave the way for the establishment of the Luftwaffe's Schlachtflieger force. He is seen here in the uniform of the NSFK.

He 50 - A dismal failure

Although Ernst Udet has always been considered the father of the German dive-bomber, several design bureaux were actually working on projects well before he famously purchased a pair of Curtiss F11C-2s from the USA. His demonstration of these in front of Göring has always been supposed to have tipped the scale in favour of the dive-bomber.

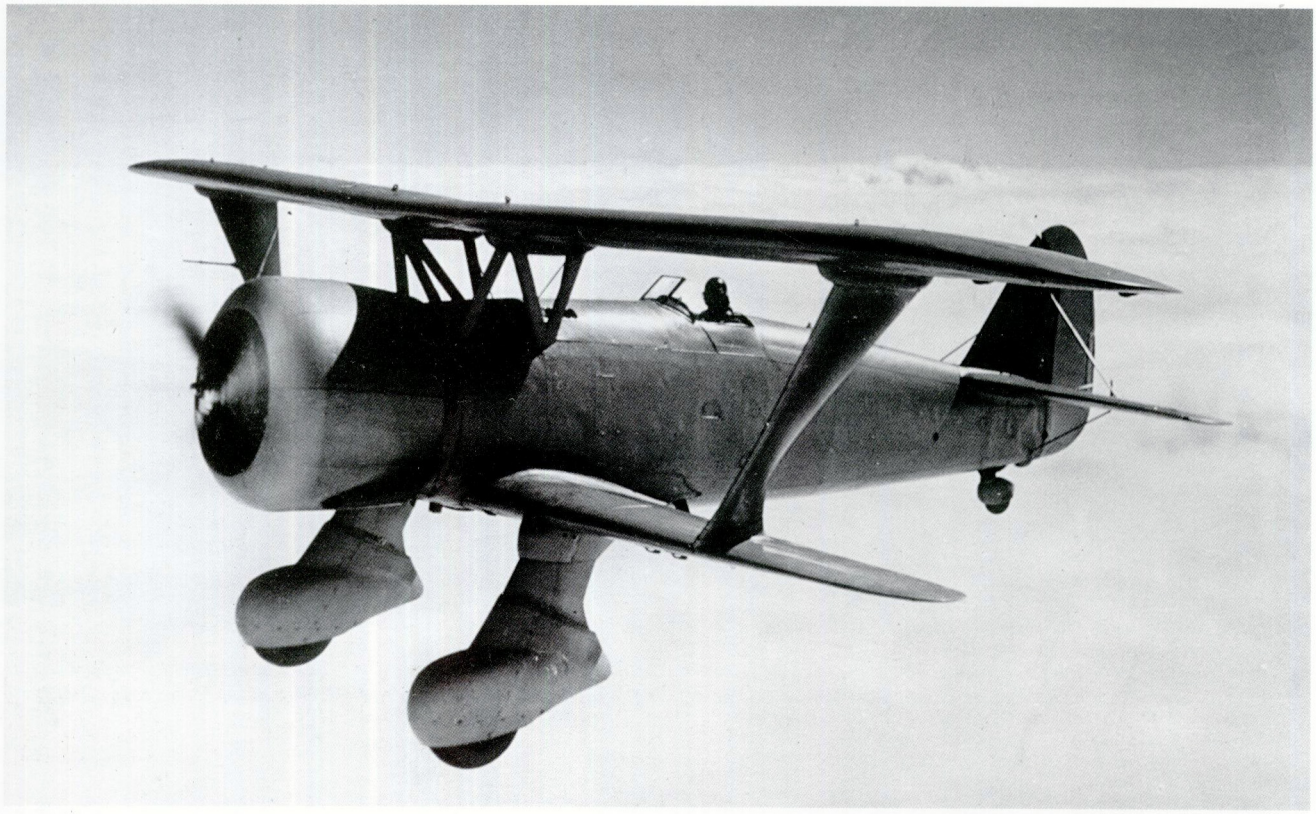
One project already under development was the Heinkel He 50 produced to a requirement by the Imperial Japanese Navy in 1931. Demonstrated at Rechlin in 1932, the second prototype (He 50aL) raised considerable interest amidst *Reichswehrministerium* officials who ordered three evaluation machines. They were powered by an uncowled Siemens 22B nine-cylinder radial engine rated at 600 hp for take-off. Though intended to be used as a single-seater in its dive-bombing role, provision was made to accommodate a rear gunner equipped with a single 7.9-mm MG 15 machine gun. A 500 kg bomb was to be carried in dive-bombing role, a 250 kg weapon to be delivered in level flight. The aircraft was also equipped with a fixed forward-firing 7.9-mm MG 17 machine gun. Two contracts were placed for a total of 60 He 50 As, deliveries beginning

Two Curtiss F11C-2 Hawk dive bombers were bought by the German Defence Ministry following a visit by Ernst Udet to the USA in 1931. After extensive testing these were presented to Ernst Udet for his personal use. These aircraft were to stimulate the Luftwaffe's interest in the dive bomber.

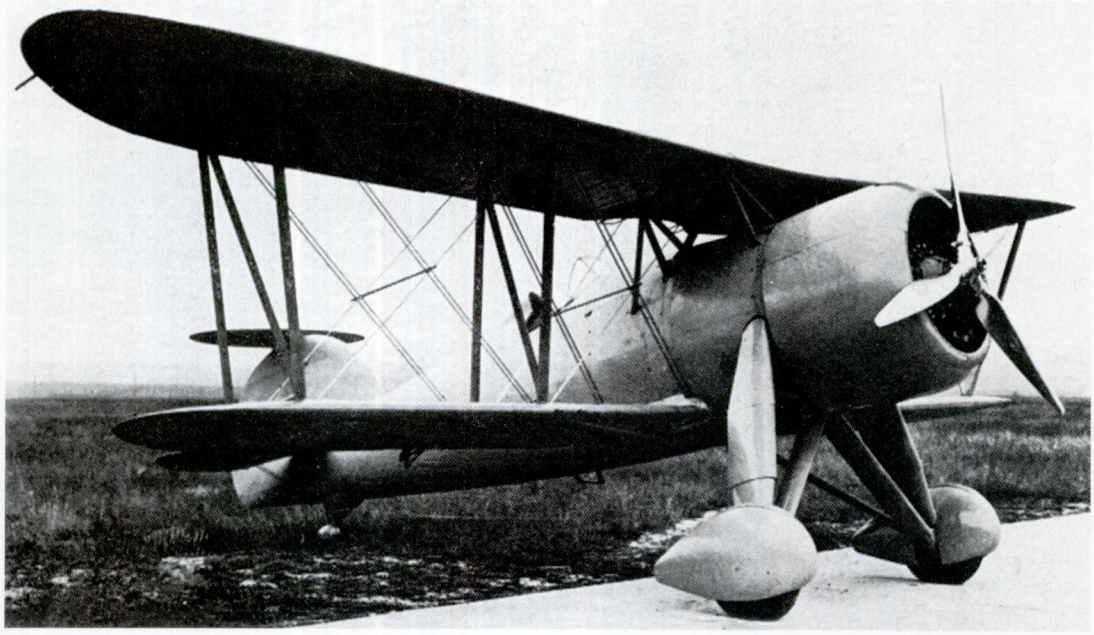
The He 50 made its first flight during the summer of 1931. The first production machines were delivered to Fliegergruppe Schwerin (later I./St.G 162) under Major Hans-Hugo Witt in 1935. The aircraft nearest the camera carries the civil registration code D-IMAA.

Although a number of He 50 dive-bombers were delivered, the type lacked adequate performance in this role. It was then relegated to training before being used in some numbers by the Störkampfstaffeln (the predecessors of the Nachtschlachtgruppen) which were established in 1942. This particular aircraft, an He 50 G, registered D-IDOI, was used for training.

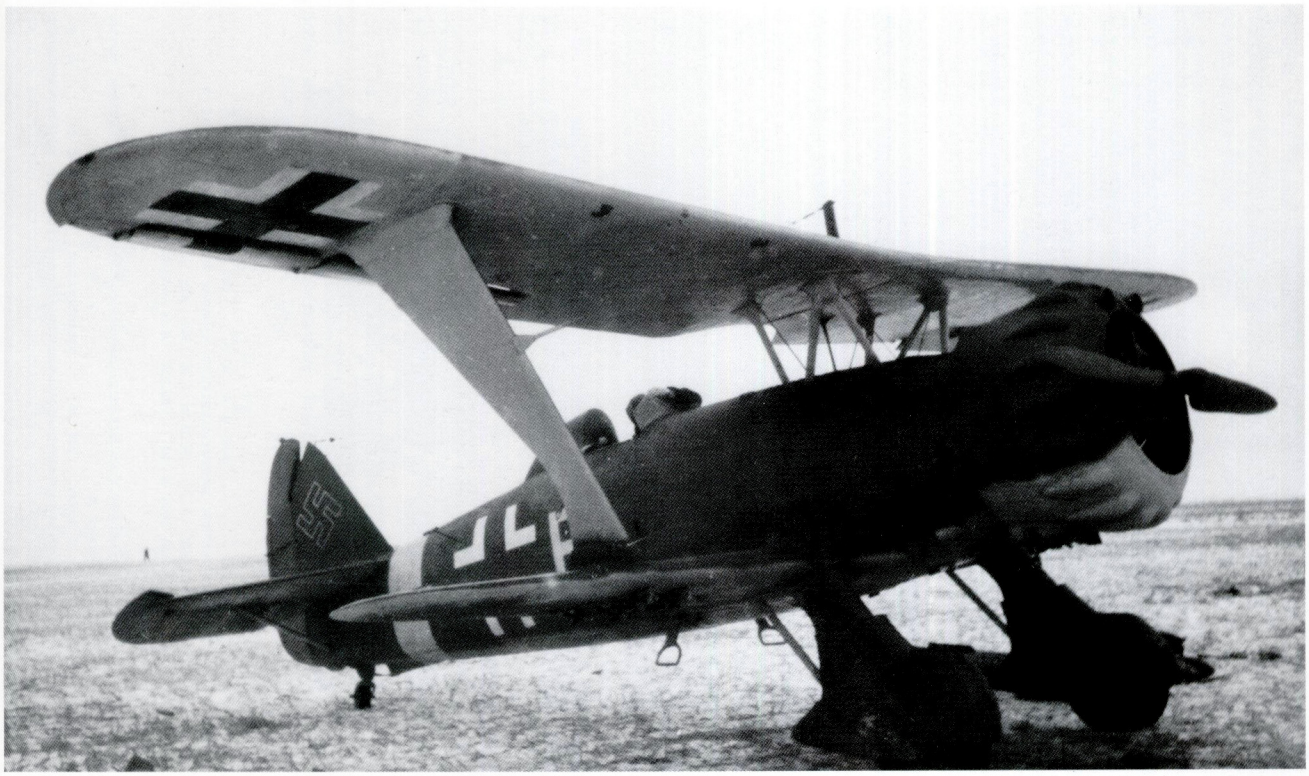
The prototype Hs 123a (later V1) made its first flight early in 1935 powered by a 650 hp BMW 132 A-3 radial engine. Two further prototypes followed which differed in having shorter engine cowlings with small bulges to cover the valve gear.



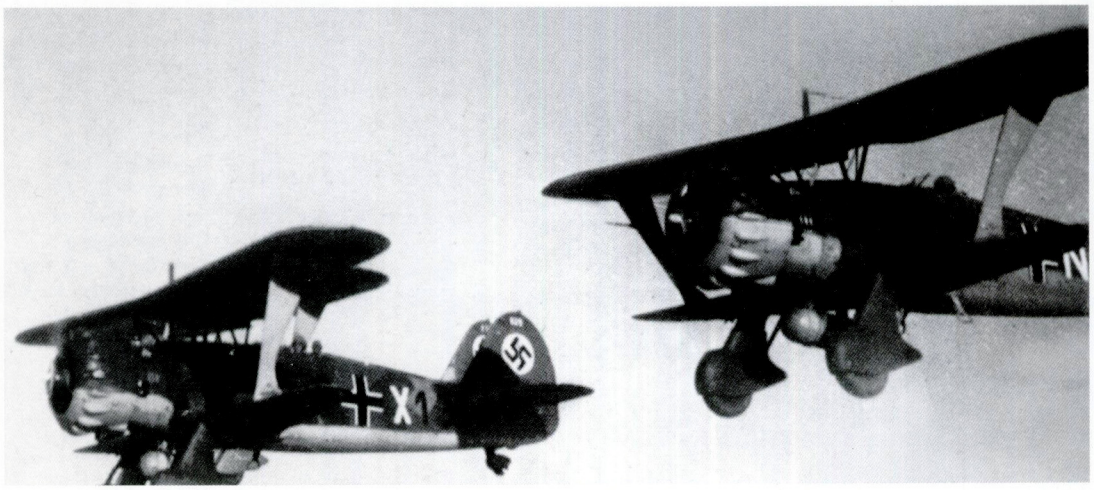
When compared with its Henschel competitor, the Fi 98 lacked the cleanliness of line with much more drag-producing struts and wire bracing. It also had a complex second tailplane mounted above the fin and rudder. From the outset it was obvious that the Hs 123 was a superior design and only one prototype of the Fi 98 was completed.



Many felt that the Heinkel competitor for the Sturzbomber specification, the He 118, was superior to the Ju 87, but a poor initial demonstration, followed by Udet crashing a prototype, sounded its death knell. The Heinkel competitor was the only one of the four to have a retractable undercarriage. This photograph shows the second prototype, the He 118 V2, registered D-UKYM, which differed from the first in being powered by an 880 hp DB 600 A engine.



As mentioned in the text, the composition of Schlachtgeshwader 1 was unusual in that the Hs 123-equipped 7. Staffel formed part of I. Gruppe. Here, 'Yellow E' of 7./Sch.G 1 stands on an airfield in Russia in 1942. The light dusting of snow suggests late Autumn, at which time the Gruppe was supporting the German drive towards Stalingrad.



A Kette of three Hs 123 A-1s coming in to land at Pocking airfield in Bavaria during Operation Otto, the march into Austria on 12 March 1938. The aircraft to the left of the photograph is 'Yellow X' of 3./St.G 165 which was formed on 1 October 1937 at Schweinfurt.

towards the end of 1933. The He 50 A was a great disappointment in both dive-bomber and ground-attack roles and it was quickly relegated to training pending the availability of a new generation aircraft. It did, however, undergo a brief renaissance in 1943 when it was used as a nocturnal intruder on the Eastern Front.

Hs 123 - Another interim type

The He 50 having been a failure, the German Defence Ministry issued a new two-stage plan for a *Sturzkampfflugzeug*, the first phase being called *Sofort* or crash programme. Two manufacturers produced designs: Fieseler the Fi 98 and Henschel the Hs 123. Both were conventional biplanes, but the Henschel design was much cleaner, with no drag-producing wire bracing. First flown on 1 April 1935 the Hs 123 V1, although powered by the same 650 hp BMW 132A-2 radial engine as the Fi 98, proved faster in climbing and level flight. Well before completion of the comparative tests, the choice was obvious.

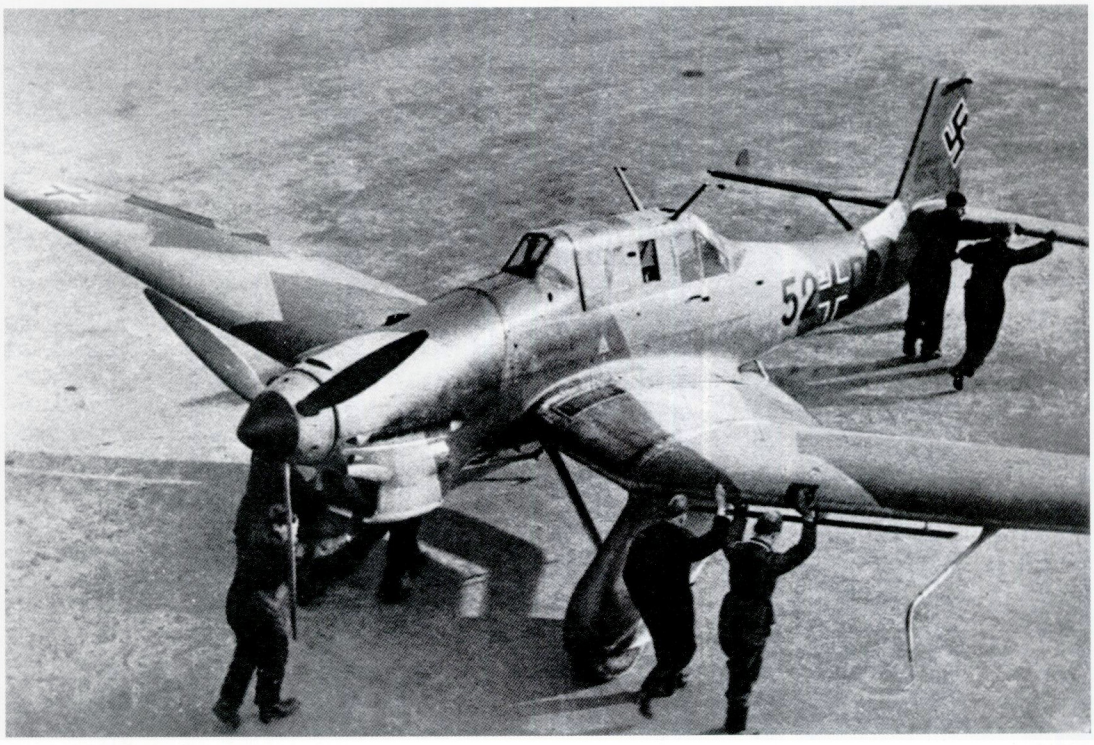
Three prototypes were built for official trials at the *Erprobungsstelle* (Experimental Station) at Rechlin. During the course of the trials, two were lost when they broke up in mid-air, both pilots being killed. Subsequent investigation showed that the wing centre section had to be strengthened, these modifications being incorporated from the fourth prototype. This aircraft, the Hs 123 V4, was extensively tested at Rechlin and proved to be easy to pull out from dives at angles of over 80 degrees from any altitude. The type was ordered into production with the first version, the He 123 A-1, being delivered in the summer of 1936. This version differed from the prototypes by its direct fuel injection BMW 132Dc engine rated at 880 hp for take-off.

The first unit to convert to the Hs 123 A was *Stukagruppe* I./162 '*Immelmann*' based at Schwerin, swapping the new type for their Arado Ar 65s and Heinkel He 50s. About 250 He 123 A-1s were built; the exact number is unknown.

The third prototype of the Ju 87, registered D-UKYQ, had an enlarged single fin and rudder and a much improved forward view. Like the V2, the V3 was powered by a 610 hp Jumo 210 Aa engine and the large 'trouser' fairings for the mainwheels.

The first production model Ju 87 As had more angular vertical tail surfaces than the V3, a more powerful Jumo 210 C engine and a further improved forward view. These aircraft are in service with I./St.G 162 at Schwerin and carry the typical pre-war camouflage of brown, medium green and pale grey on all uppersurfaces.

This Ju 87 A-1 was the only such aircraft to operate with the trials fighter Staffel Versuchs-Jagdstaffel 88, abbreviated as VJ/88, the rest of the Staffel being equipped with the Hs 123. Note the bowler hat and umbrella emblem on the undercarriage fairing which was a display on the pilots' 'civilian' status.



Despite its overall dark appearance, the segments of 63 visible on the starboard wing and immediately behind the canopy confirm that this production Ju 87 A-1 was finished in the 61/62/63/65 scheme. Note also the Swastika banner on the tail.

Ju 87 - State-of-the-art in dive-bombing

The Hs 123 was seen as an interim type as work progressed on what was to become the dive-bomber *par excellence*, the two-seat Junkers Ju 87. Initially this aircraft falls outside the scope of this book but, as we shall see, it later formed the backbone of the *Schlachtfliegergruppen*.

Design work began in 1933 with *Dipl.-Ing.* Hermann Pohlmann responding to the second phase of the *Sturzbomber Programm* which required a more advanced aircraft incorporating new devices such as dive brakes and having a performance close to that of a fighter. The subsequent specification for the dive-bomber was in fact drawn up around the Ju 87, only later being issued to Arado, the Hamburger *Flugzeugbau* and Heinkel, in addition to Junkers in January 1935. So confident were Junkers that they would win the RLM's endorsement, that they had begun to build three prototypes (the V1 to V3) during the summer of 1934, thus enjoying another comfortable advance over their competitors! The first prototype was powered by a Rolls-Royce Kestrel driving a two-blade wooden propeller. It was an atrociously ugly bird with its inverted gull wing, fixed spatted undercarriage, projecting chin radiator and braced tailplane carrying twin squared vertical surfaces. Early in the diving trials, it was destroyed in a crash after one of the vertical tail surfaces broke away during the pull-out. Investigations led to a major redesign of the entire tail assembly on the V2, which was powered by a Junkers Jumo 210Aa inverted-Vee engine rated at 610 hp. The twin fin configuration gave place to a single fin and rudder with which the V2 resumed flight trials in September 1935. Comparative trials between the four contenders did actually take place at Rechlin in March 1936, but a decision had already been made.

Oberst Wolfram von Richthofen, who as head of the Development Section of the RLM, tried to put an end to the production of the Ju 87 on 9 June 1936 - he was subsequently overruled by Udet.

The first pre-production Ju 87 A-0s came off the assembly line before the end of the year. They were powered by a Jumo 210Ca engine rated at 640 hp at 2,700 m and equipped with a flexible 7.9-mm rear-firing machine gun. Several other modifications designed to simplify mass production were also incorporated. The first true production variant was the Ju 87 A-1 which was delivered by the Dessau factory from early 1937. I./St.G.162 '*Immelmann*' was the first unit to convert from the Hs 123 A to the Ju 87 A-1. Plans were to have four of the six *Stukagruppen* flying the Ju 87 A by the end of the year.

The Ju 87 programme was supported by many influential personalities within the RLM, its foremost advocate being Ernst Udet who believed that it would be the *Luftwaffe's* supreme weapon. Others were less enthusiastic about the characteristics of this unwieldy and vulnerable aircraft, realising that it would require complete air superiority over the battlefield to keep losses to an acceptable level. *Oberst* Wolfram von Richthofen was one of them. As the head of the Development Section of the RLM he tried, on 9 June 1936, to put an end to production of the Ju 87, but he was overruled by Udet who took over the command of the Technical Office on the following day. By an odd stroke of fate, Richthofen would lead VIII. *Fliegerkorps*, a group of most of the Ju 87 units, with great success during the Second World War.

Though the dive-bomber can be considered Udet's brainchild, he was not the father of the Ju 87, but, by reversing Richthofen's decision, he had ensured that the Third Reich would not be deprived of one of its most dreaded weapons.

Shortly after this, major events took place in Spain which would provide Germany with a full-scale laboratory to test not only its men and machines but also its tactics and strategies. These would be put to good use three years later.

The Spanish Experience

by J. Richard Smith

On 18 July 1936 the right wing Nationalist forces, led principally by General Francisco Franco Bahamonde, Governor of the Canary Islands, led a revolution against the left wing Republican government in Spain. Shortly afterwards, Franco flew to Spanish Morocco which had already fallen to the Nationalists and possessed some 47,000 well-trained troops. Within four days the Spanish mainland had become divided with the Republicans in control of much of the south and east, plus a northern coastal strip including Oviedo, Santander and Bilbao, and the Nationalists holding the remainder of the country plus the cities of Seville and Cadiz in the south.

General Francisco Franco Bahamonde, Governor of the Canary Islands, who led a revolution against the left wing Republican government in Spain.

Three of the first six He 51s to arrive in Spain photographed at Salamanca airfield early in 1937. Initially they carried simple identification numbers '1' to '6', but later the He 51's type number '2' was added forward of the fuselage national insignia. It was around this time that the shortcomings of the He 51 fighter were becoming obvious and the machine was transferred to ground attack, a role which it developed and which resulted in the establishment of the Luftwaffe Schlachtflieger.

In order to ferry his troops across the Straits of Gibraltar, Franco turned to fascist Germany and Italy to obtain help. Both countries were very favourable to the Nationalist cause, with the former supplying a score of Ju 52/3m transport aircraft. Six of these were later modified to carry bombs, making their first operational sortie on 13 August. About the same time, Germany provided the fledgling Nationalist air force with six brand new Heinkel He 51 fighters, known to be much superior to the French Nieuport 52 which was then the most modern fighter operated by the Republicans. However, the poor showing of the Spanish pilots led to the return of the three remaining He 51s to their *Luftwaffe* crews who carried out all further missions themselves. More He 51s were delivered to German volunteers in September.

A formation of three He 51s in formation over the Spanish coast near Villaviciosa before striking at Republican troops during the Nationalist offensive against Gijon on the northern front.

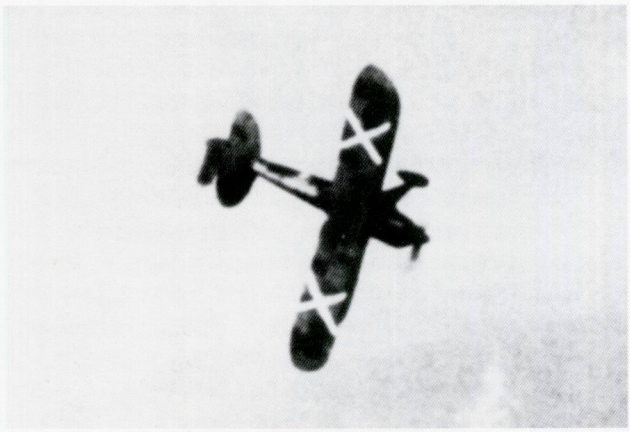
Meanwhile, the Soviet Union had rushed in men and arms to reinforce the Republicans, denying all hope of an early victory to the Nationalists. German Chiefs-of-Staff were unhappy with the way Franco was running the war, considering that he had missed the opportunity to put a quick end to the conflict in October. Consequently the decision was taken to establish a force of 4,500 'volunteers' to be known as the Condor Legion. Established on 7 November 1936, the Legion was put under the command of *Generalmajor* Hugo Sperrle, with *Oberst* Wolfram *Freiherr* von Richthofen as Chief-of-Staff. Apart from helping the Fascist cause, Germany's leaders saw an opportunity to test its latest weapons and aircraft and also help improve tactics and procedures. Apart from the aviation component, which was eventually to reach the strength of a *Fliegerkorps*, the force also included a number of Pz. I tanks, field guns and the first of the superb 88 mm Flak 36 anti-aircraft gun.

The first fighters destined for the Legion, 60 He 51 biplanes, arrived in secrecy at Seville in Spain on board the vessels *Berlin* and *St. Louis* on 18 November. These were delivered to J/88 *(Jagdgruppe 88)* commanded by *Hptm.* Hubertus von Merhart based at Avila and Escalona. Although operations were initially quite successful, the arrival of the first Soviet-built Polikarpov I-15 *Chato* (and later I-16 *Rata*) fighters in Spain in October was to change things. It was quickly established that apart from being inferior in virtually every aspect to the Soviet fighters, the He 51 was 100 km/h (70 mph) slower than the new Tupolev SB-2 *Katiuska* bomber. In addition the Heinkel possessed no radio, and its guns had to be manually cocked after each burst of fire.

Far left: Typical of the forces which were being attacked by the He 51 close-support aircraft were these Republican troops on the Cordoba front. Many troops, on both sides of this bloody conflict were ill-equipped, but the war did serve as an invaluable training ground for the fledgling Luftwaffe.

In early February 1937, 1.J/88 was based at Escalona, 2.J/88 at Almorox, 3.J/88 at Villa del Prado and 4.J/88 (the original German fighter unit in Spain) at León. One particularly disastrous operation took place early on 12 February when Ju 52/3ms from K/88 (the Legion's bomber component) attempted daylight strikes with the aim of denying Republican forces the use of roads during the Nationalist offensive in the Jarama valley, south of Madrid. The bombers were escorted by He 51s, but fierce opposition from *Chatos* and *Ratas* broke up two attacks and resulted in the loss of two Heinkels. Their

A group of He 51 ground-attack aircraft parked on a Spanish airfield during the summer of 1938. All Nationalist aircraft operating in Spain were given an identification number. The numerals painted to the left of the fuselage national insignia identified the type, the group to the right being the aircraft's individual number. The type code for the He 51 was '2', and the last known machine to be delivered was '2●131'.



During the summer of 1937 1.J/88 under Oblt. Harro Harder was still equipped with the He 51. Harder's aircraft, 2●64, initially carried a white Hakenkreuz or swastika marking on both sides of the fuselage. This was officially frowned upon and was later replaced by a simple white diagonal cross. This machine was later flown by the Kapitän of 4.J/88, Oblt. von Trützschler-'Élsa.

A spectacular photograph showing an He 51 winging over before diving on its target. The large white diagonal cross markings on the aircraft's wings were standard on most aircraft serving with the air forces sympathetic to the Nationalist cause.

pilots, *Hptm.* Walter Palm and *Lt.* Hans-Jürgen Hepe were shot down in flames, though they both managed to parachute to safety in friendly territory near Madrid. At one stage during this action the ludicrous situation developed where the fighters, rather than protecting their own bombers, were often forced to seek the shelter of their charges' guns. Throughout February J/88 recorded only one victory, by Hepe over a *Chato* on 12 February. Following this debacle, Sperrle was forced to confine J/88 to low-level close ground support missions, initially on the quieter sectors of the Madrid front.

Distressed by this inability to fight on equal terms, von Merhart sought an interview with Sperrle at which he refused to send his pilots into the air against such overwhelming odds. He also warned that if he were directly ordered to do so he would demand to be relieved of his command and return to Germany. The result of this unpleasant interview was that four prototype Bf 109s and one He 112 were sent to Spain for trials early in December.

The lack of success around Madrid led Franco to switch direction and attempt to take the strip of Basque territory along the northern coast between Gijon and Bilbao. For this operation, *Jagdgruppe 88* was transferred to Vitoria and, simultaneously, aircraft were shipped to Vigo instead of Cadiz. The offensive began on 31 March, the main thrust directed towards the Ochandiano-Bilbao area. By this time, 2.J/88 had re-equipped with the splendid new Bf 109 B fighter monoplane which left the He 51s of 1. and 3.J/88 (4.J/88 having been disbanded) to concentrate on air support for the ground forces. For these operations the aircraft were equipped with the *Elvemag* 6 C 10 IX rack in the fuselage which could carry six 22 lb SD 10 fragmentation bombs in addition to their two fixed forward-firing 7.9 mm MG 17 machine guns. Their tactics were nicknamed '*Cadenas*' (Chains) a method of 'follow-my-leader' attacks against targets of opportunity. At the same time special radio liaison teams were established by von Richthofen to accompany army units spearheading an attack. Personnel for this purpose were drawn from Ln/88 (Air Signals Battalion 88).

It was in March 1937 that von Richthofen witnessed a ground attack by He 51s. He was so impressed that he asked for three Hs 123s to be sent to Spain. These were later joined by other aircraft of the type and although they operated initially as dive-bombers, they were also very successful in the ground-attack role, bombing and strafing the battlefield with excellent results. As the British Air Ministry's official history of the

The competent but abrasive Generalmajor Hugo Sperrle (seen here in Luftwaffe uniform after the Spanish Civil War) had served in the German flying service during the First World War. He commanded the Legion Condor from November 1936 to November 1937.

A mixed group of German and Spanish officers watching an operation during the Spanish Civil War. Standing, in the front row with the binoculars, is Oberst Wolfram von Richthofen, the Condor Legion's first Chief-of-Staff.

Luftwaffe was later to state: *"This far-seeing move was to prove Richthofen to be right; furthermore, it was to pay handsome dividends in the victorious continental campaigns of 1940 and in the rapid German advance to the gates of Moscow in 1941. Largely as a result of this early turn in the course of the development of the German Air Force, its General Staff came to look upon it more as a close-support or tactical arm than a strategic weapon."*

On 27 April 1937, He 51s chased survivors from the infamous raid on Guernica by the Ju 52s of K/88, strafing the streets and the roads off the city. Not surprisingly, the German pilots have always been reluctant to speak of these events. Four days later the units destroyed about 40 trucks in six missions but these sorties involved some risk as exemplified by the loss to flak of two pilots from 1.J/88, *Lt.* Joachim Wandel and *Uffz.* Hans Kolbow, on 13 May. The former was captured and sentenced to death but eventually swapped for Nationalist prisoners. Not long afterwards the first *Staffel* began re-equipping with the Bf 109, eventually leaving only 3.J/88 with the He 51.

The 'Marabu' (Marabou) badge of 1.J/88 was carried by both its He 51s and Bf 109s. This Heinkel, coded 2●62, carries the typical camouflage scheme of the mid-war period.

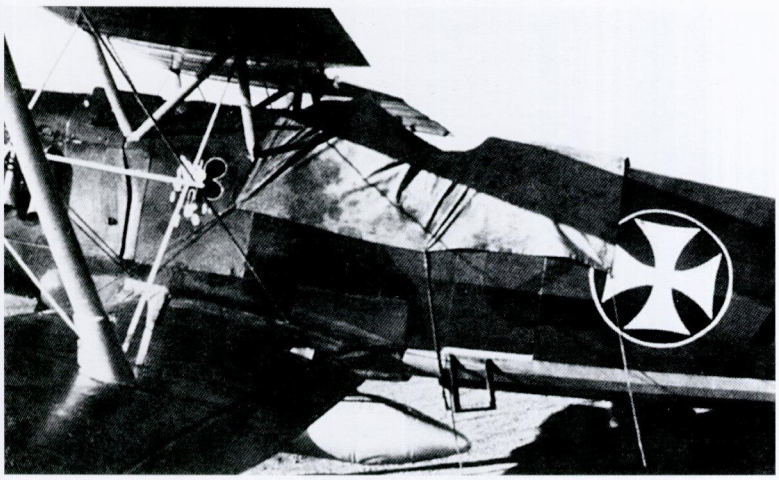
The four Staffelkapitäne of J/88 photographed in April 1938. From left to right are Oblt. Wolfgang Schnellmann (1.J/88), Oblt. Adolf Galland (3.J/88), Oblt. Joachim Schlichting (2.J/88) and Oblt. Eberhard von Trützschler-'Élsa (4.J/88). At this time the first and second Staffeln were equipped with the Bf 109 but the other two retained their He 51s which were operated in the ground-attack role.

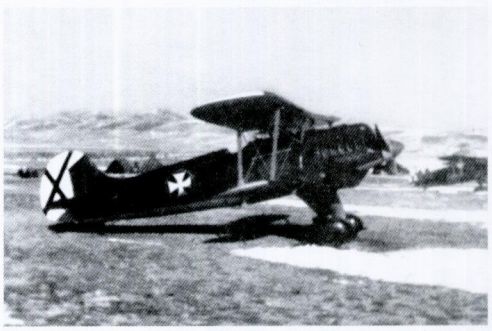
Enter 'Dolfo'

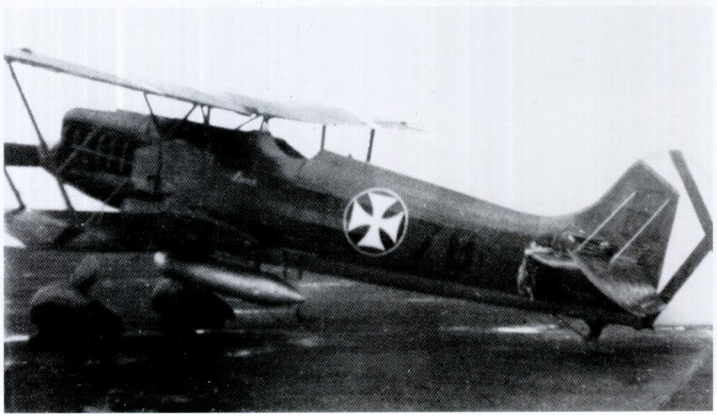
On 27 July 1937, *Oberleutnant* Adolf 'Dolfo' Galland took over command of 3.J/88. He was disappointed to find that his unit had been relegated to ground-attack: *"From the point of view of a fighter pilot, it was unfortunate. Air-to-air combat is, for a fighter pilot, the highest test concentrating his skills and know-how. German ground-attack aircraft became an essential component of any Nationalist operation. The Reds had no equivalent. It is true that, on the experience they acquired with us in Spain, the Red Army learned quite a lot and developed ground-attack aviation to such an extent that anyone that fought on the Eastern front can only talk of it with much respect and awe."*

In celebration of their role, the *Staffel* called themselves the 'Deep-sea divers from the race of the Mickey Mice', Mickey Mouse being the emblem of the previous *Kapitän, Oblt.* Douglas Pitcairn. By this time, 3.J/88 had developed a new ground-attack weapon, a forerunner of napalm. Because of the short range of its operations it was found unnecessary for the Heinkel to carry additional fuel in its 170 litre (37 Imp.gal) drop-tanks. The ground crews therefore experimented with tying two SD 10 bombs to the sides of the tank and dropping the complete assembly on the target. Tests proved successful, the tank bursting on impact, scattering 87 octane fuel over an area of about 100 m2 which was then set alight by the exploding bomb.

After he took over command of 3.J/88 on 27 July 1937, Oblt. Adolf 'Dolfo' Galland flew this He 51 coded 2●10. The aircraft was damaged in a landing mishap which flipped it over on to its back. Galland's replacement aircraft was 2+78.





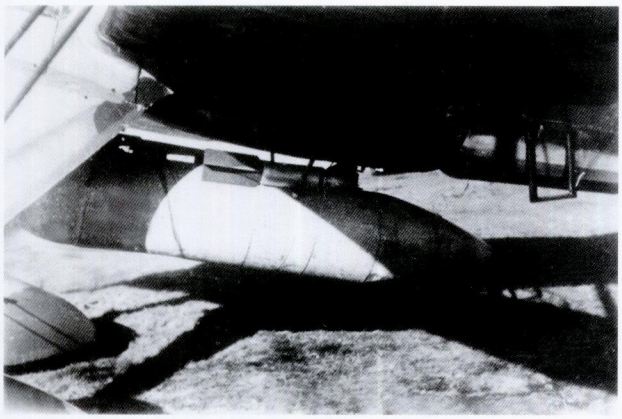


Three views of Adolf Galland's He 51, coded 2+78. Points of interest are the Mickey Mouse badge painted on both sides of the fuselage of the He 51s of 3.J/88. This was adopted by Oblt. Douglas Pitcairn, who preceded Galland as Staffelkapitän. Pitcairn was the descendant of a Scottish family which had fled to Germany due to religious persecution. Galland's He 51 was unusual in having a white Maltese style cross within a thin white circle placed over the conventional solid black circle.

Mickey Mouse detail from Galland's He 51 B-1.

Heinkel He 51 B-1, code 2+78 of 3.J/88

Flown by Oberleutnant Adolf Galland of 3.J/88, spring 1938. At this time Galland was Staffelkapitän of 3.J/88. His aircraft had an unusual version of the black fuselage circle which was also overpainted with a Maltese style cross. Camouflage was unusual for aircraft in Spain, comprising black-green RLM 70 and dark-green RLM 71 uppersurfaces with pale blue RLM 65 underneath.



For ground-attack operations, the ground crews of 3.J/88 tied two SD 10 anti-personnel bombs to the 170 litre (37 Imp.gal) drop tank mounted below the fuselage of the He 51. The intention was for the tank to burst after it hit the ground scattering its contents over an area of 100 m2 (1,000 sq ft). The bombs would then explode, igniting the fuel.

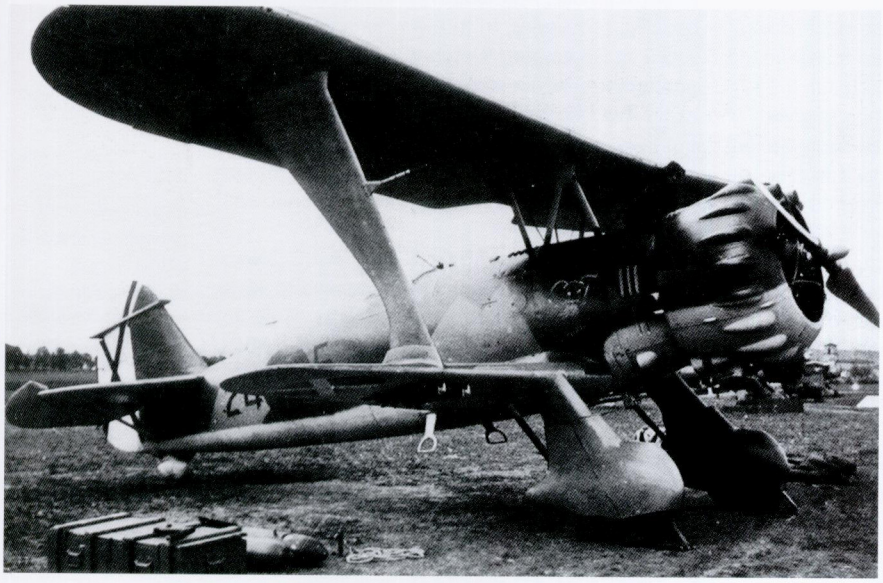
Below: The Heinkel He 51 fighter biplane had been developed from the He 49 which made its first flight in November 1932. A fairly unremarkable design powered by a 750 hp BMW VI 12 cylinder liquid cooled in-line engine, the production He 51 B had a maximum speed of 330 km/h at sea level and a cruising range of 750 km at 4,000 m.

While Santander fell to the Nationalists on 25 August, the Republicans decided to mount an attack on Zaragoza. Galland's 3.J/88 immediately became involved in defending the city and their actions helped to defeat the Republican attack by 9 September. Previously, on 1 September, Franco had launched a drive into Asturia with the aim of taking its capital city Gijon and overrunning the one remaining enemy enclave in the north. For this the whole of J/88 was moved to Pontejos with the remaining He 51s operating with varying degrees of success against targets of opportunity. Finally, on 21 October, Nationalist forces entered Gijon and the Republican northern front effectively collapsed, 150,000 prisoners falling into Franco's hands.

The *Jagdgruppe* then moved to León for rest and recuperation, a new 4.*Staffel* being formed under *Oblt.* Eberhard von Trützschler d'Élsa on 2 November 1937. All the He 51s and pilots for the new squadron were shipped from Germany aboard the *Golfo de Panama* but it was to operate mainly as a training unit.

The lull in fighting ended on 16 December when Republican forces launched a surprise pincer movement, breaking through Nationalist troops and surrounding the exposed town of Teruel. Despite the freezing temperatures the He 51s of 3. and 4.J/88 were heavily engaged but, on 7 January 1938, they were caught on the ground at Calamocha by SB-2s which destroyed two aircraft and damaged a further three. As operations continued problems mounted and pilots began to realise that the performance of the He 51, even in ground-attacks, was far from adequate.

This He 51, named 'Annelis', was flown by Stabsartz. Dr. Heinrich Neumann early in 1938. Dr. Neumann flew an He 51 unofficially until he was involved in a crash. After this he received permission to fly the aircraft shown here. The legend painted on the side of the fuselage reads 'Tut mir nichts, ich tu' Euch auch nichts!' ('If you don't do anything to me, I won't do anything to you!').



At least 13 Henschel Hs 123s were sent to Spain but the type operated mainly as a dive-bomber rather than a ground-attack aircraft. Following the introduction of the Ju 87 the Hs 123 was transferred to the newly established Schlachtflieger where it formed the main type of equipment during the first part of the Second World War.

Teruel was finally recaptured by the Nationalists on 21 February, and early in March they began advancing east across the Ebro river towards the Mediterranean. Now all four *Staffel* of J/88 were operating against ground targets but, on 30 March *Hptm.* Hubertus Hering (nominated to succeed Galland) was killed when his He 51 collided with another over Alcarraz. On 23 April the Nationalists began advancing on Valencia. Because of bad weather and a lack of supplies from Germany, which was then engaged in the entry into Austria, the advance was very slow and it was not until July that Nationalist troops neared the city.

One of the pilots who arrived in Spain at this time was *Lt.* Günther Scholz who was transferred to 3.J/88. He was surprised to find that aerial combat was forbidden: *"The fact was that our He 51s were outclassed in the air by the more modern Soviet-built machines which opposed them. In order to avoid losses, our briefing was to only drop bombs or to strafe enemy positions."*

On 18 May *Oblt.* Werner Mölders finally took over from Galland command of 3.J/88, which was still flying ground support operations with the He 51. He led his first operation against a heavily defended ground target on 31 May, but further losses suffered by the He 51s led the acting commander of J/88 to ask for the temporary suspension of operations by both 3. and 4.J/88. Shortly afterwards 4.J/88 was disbanded and the remaining Heinkels handed over to the Nationalists, 3.J/88 converting to the Bf 109. From then on until the end of the war J/88 concentrated mainly on fighter and bomber escort missions, although a few ground-attack operations were flown using the Bf 109.

The success of the ground-attack operations in Spain and the prospect of a war over the Sudetenland led the *Luftwaffe* to establish no less than five specialised *Schlachtfliegergruppen* on 1 August 1938. Personnel were drawn mainly from fighter units and comprised:

SFG 10 under *Hptm. Graf* von Pfeil und Klein-Ellguth formed at Tutow equipped with the Hs 123
SFG 20 under *Major* Werner Rentsch also formed at Tutow equipped with the He 45
SFG 30 under *Hptm.* Siegfried von Eschwege formed at Fassberg equipped with the Hs 123
SFG 40 under *Major* Werner Spielvogel also formed at Fassberg equipped with the He 45
SFG 50 under *Hptm.* Hans-Günther von Kornatzki formed at Lechfeld equipped with the Hs 123

Following the successful conclusion of the Sudeten crisis four of these *Gruppen* were disbanded with SFG 10 becoming II.(*Schlacht*)/LG 2, Spielvogel taking over command. Retaining their Hs 123s, it was this *Gruppe* that was to form the basis of the *Luftwaffe's* ground-attack force, a force which, as we shall see, became possibly one of the most important in combating the enormous Soviet armies on the Eastern Front.

Tip and Run by Chris Goss

In March 1941 what were to become recognised as 'tip and run' attacks first started to be developed. It was decreed that one *Staffel* from each of the three *Gruppen* of JG 2 would re-establish to become *Jabostaffeln*. The first *Staffel* to re-establish was 7./JG 2 and was apparently detached to Denain on the French/Belgian border to be taught the rudiments of *Jabo* operations by *Erprobungsgruppe* 210. The remaining two *Jabostaffeln* were 2 and 6./JG 2. However, all three *Staffeln* continued to fly pure fighter operations, and *Jabo* missions still appear to have been secondary to pure fighter operations.

2./JG 2's first mission was not flown until 26 April 1941 and a series of similar attacks followed in the ensuing weeks. It is believed that 2./JG 2's final fighter-bomber attack took place on 30 May 1941 by which time the *Luftwaffe* had credited 2. and 6./JG 2 with sinking two freighters and a tanker as well as damaging a submarine, a cruiser and a freighter.

Oblt. Liesendahl (right) with Walter Oesau, the Kommodore of III./JG 2. On 17 July 1942, after 10.(Jabo)/JG 2 had converted to the Fw 190, Liesendahl was flying 'Blue 14', an Fw 190A-2, W.Nr. 0439, when he was shot down by light anti-aircraft fire from a tanker off Brixham, Devon. His body was later recovered from the sea and the propeller, recovered from the submerged wreck of his aircraft, is currently in private ownership in Britain.

It is about now that the name Frank Liesendahl starts to be mentioned more and more in respect of the development of *Jabo* attacks. His *Luftwaffe* career began in 1936 and it is believed that he participated in the Polish Campaign in September 1939. In November 1939 he was posted to 6./JG 2 and was then transferred to be the *Gruppen Adjutant* of II./JG 2, participating in the French Campaign. Although no formal records exist, he was shot down, wounded and taken prisoner over Dunkirk on 26 May 1940 whilst carrying out a *Tiefangriff* (ground-attack) against ground targets, a tactic that he was destined to develop just over a year later. Released from captivity, Liesendahl spent at least eight weeks in hospital recovering from his wounds before he returned to command 6./JG 2 in September/October 1940.

On 10 July 1941, Liesendahl was again shot down and wounded (not on a *Jabo* mission) and again it is believed that he spent the next eight weeks in hospital putting his experiences as a *Jabo* pilot onto paper and developing new tactics. Liesendahl returned to JG 2 in late Summer 1941 and it is then believed that he persuaded the current *Geschwader Kommodore, Major* Walter Oesau, of the benefits of a dedicated and independent *Jabostaffel* and so it was that 13./JG 2 was created on 10 November 1941.

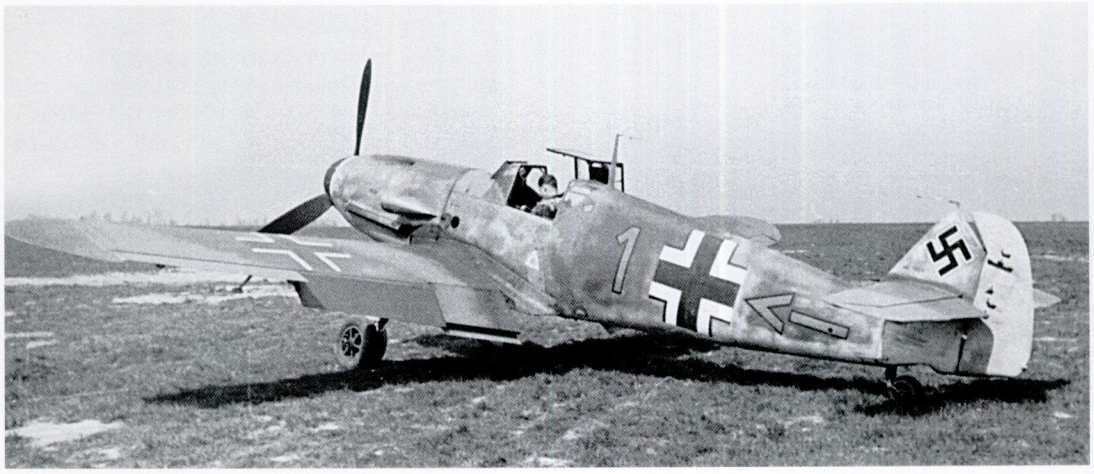
Liesendahl's new *Staffel* soon began to receive those pilots who had flown with 2., 6. and 7./JG 2 who showed greater flair as *Jabo* as opposed to fighter pilots, as well as less experienced pilots posted to JG 2 straight from training. It is not known exactly what form this training took but from 10 November 1941 to 18 February 1942, Liesendahl's *Staffel* trained and perfected the tactics they would employ against British shipping. During the months of training, Frank Liesendahl devised what was called the '*Liesendahl Verfahren*', the 'Liesendahl Process', and this was quickly adopted as the preferred method of *Jabo* attack. Approaching the target at 450 kph and at an altitude of five metres, 1,800 metres from the target the fighter-bomber would climb to a maximum height of 500 metres before levelling off, diving at 550 kph and a dive angle of 3 degrees before pulling up and lobbing the bomb at the target.

Although the winter months were spent on the theoretical training of the pilots and ground crews and practice flights, it is believed that 13./JG 2 did undertake a number of trial attacks. According to British records, the first recorded 'tip and run' attack was made against an unspecified target at Fairlight in Sussex on Christmas Day 1941, and then in January 1942 'tip and run incidents' were mentioned as having occurred in Kent (three), Sussex (nine), Dorset (two), Hampshire (one), Cornwall (28) and the Isle of Wight (one). However, no firm evidence has been found to prove 13./JG 2's involvement.

Nevertheless, it would appear that Liesendahl was still trying to convince senior officers of the value of *Jabo* attacks and this proof finally came on 10 February 1942 when a 3,000 BRT steamer was badly damaged by his *Staffel* off the Cornish Coast. Eight days later, 13./JG 2 was declared fully operational and on 4 March 1942, *Jafü* 3 authorised *Jabo* missions as well as ordering JG 26 to form its own *Jabo Staffel* with effect from 10 March 1942.

It was clear that JG 26 was at a distinct disadvantage when it came to *Jabo* operations,

An unknown Unteroffizier pilot of an unknown 10. Jabo gruppen (either JG 2 or JG 26) kneels before a SC 250 bomb in front of an Bf 109 F-4/B. The chalked inscription on the side of the bomb reads "The rest from the Kommandantur".

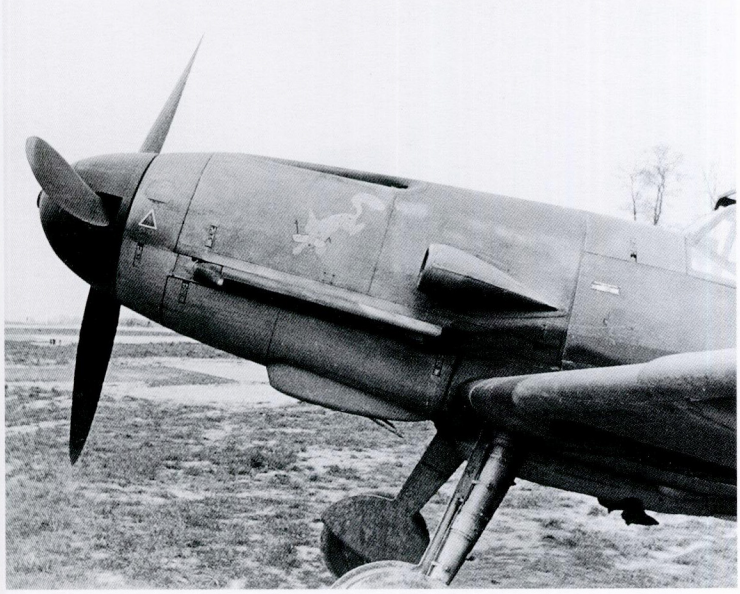


This Bf 109 F-4/B coded 'Blue 1' was flown by Oblt. Frank Liesendahl, Staffelkapitän of 10.(Jabo)/JG 2, a unit which operated mainly against coastal shipping in the English Channel. The markings painted on the rudder of Liesendahl's aircraft, illustrate the successes claimed during these operations.

Emblem of 10.(Jabo)/JG 2

Messerschmitt Bf 109 F-4/B 'Blue 1' flown by Oblt. Frank Liesendahl, Staffelkapitän of 10.(Jabo)/JG 2 (formerly 13./JG 2), Spring 1942

Oblt. Liesendahl's W.Nr. 7629 was camouflaged in an RLM 74/75/76 scheme with the fuselage sides in a mottle of 74 and 75 which extended well down the fuselage sides and which was particularly dark around the areas of the aircraft's individual markings. Standard yellow identification markings appeared under the nose and on the rudder, the latter being marked with the silhouettes of ships sunk and damaged. Each silhouette is marked with the date the ship was attacked and the vessel's tonnage.



The markings painted on the rudder of Liesendahl's aircraft, shown in detail illustrate the successes claimed during these operations.

Ground crew working on 'Blue 7', another of the Staffel's fighter-bombers. Note that the rudder markings on this aircraft are identical to those on 'Blue 1', suggesting that they represent the successes of the Staffel as a whole rather than the individual pilots. An all-black silhouette is thought to indicate a sinking whereas the black segments probably represent the area the bomb struck and the extent of the damage caused.

not having JG 2's three month work-up period and a *Staffelkapitän* as dedicated to such operations. With the apparent unsuitability or unwillingness of some of JG 26's pilots for 'tip and run' missions coupled with a lack of formal *Jabo* training, the initial effectiveness of 10./JG 26 (as it soon was designated) was questionable. British analysis of 'tip and run' attacks supports the imbalance of missions between 13./JG 2 and 10./JG 26 in March 1942, the first month of authorised operations. 17 'tip and run' attacks were carried out in 10./JG 26's area of operations whilst 13./JG 2's area of operations reported 49 such attacks.

The first clear evidence of a 'tip and run' attack took place on 7 March 1942. Four Messerschmitt 109s succeeded in reaching the Devon coast undetected and then roamed unmolested in the Exmouth-Teignmouth area with houses in Exmouth and Teignmouth Pier being machine-gunned.

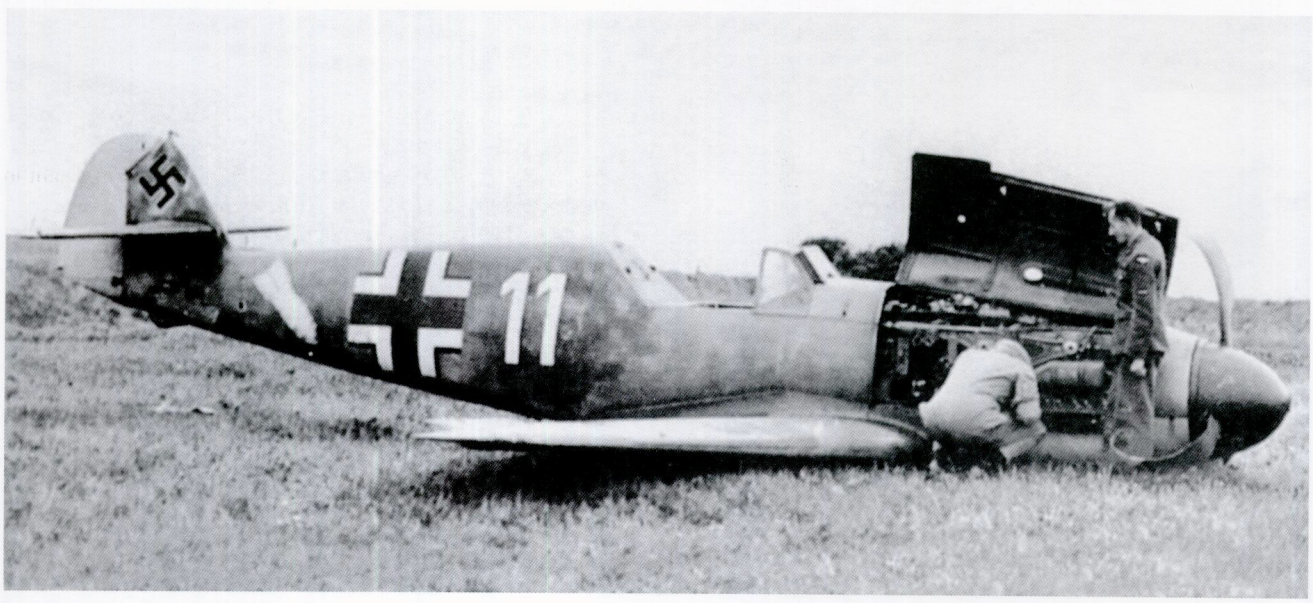
It would appear that this attack, if it was 13./JG 2, was very much a precursor attack as for much of March 1942, coastal targets appeared to be 13./JG 2's preferred target with initially convoys and then harbours being attacked.

In April 1942, 'tip and run' raids increased dramatically, with British intelligence reporting 156 such attacks. April also saw a shift to land targets, particularly gas holders as these were such prominent targets, easily visible whilst approaching the coastline at high speed and low- level.

Of greater concern were two attacks carried out, presumably by the newly re-designated 10./JG 2, against the Telecommunications and Research Establishment (TRE) at Worth Matravers in Dorset. Much of Britain's radar and radar-related research and development was being carried out at the TRE and on 6 April 1942, three Messerschmitt 109s attacked the site causing unrecorded damage; at lunchtime two days later, another attack killed two and injured six. The site was unoperational for four days and because of the risk of further attacks, the TRE was moved to Malvern in Worcestershire in May 1942.

The remainder of May 1942 saw little change to German tactics and targets but in mid-June 1942, both *Jabostaffeln* were withdrawn piecemeal to begin re-equipping with the far more potent Focke-Wulf Fw 190. Accordingly, 'tip and run' attacks decreased but 10./JG 2 was able to fly its first attack with the Focke-Wulf

RAF personnel inspect a Messerschmitt Bf 109 F-4, 'White 11', W.Nr. 7232, flown by Uffz. Oswald Fischer of 10.(Jabo)/JG 26 who was shot down whilst on a Jabo mission to the Newhaven area on 20 May 1942. Hit by fire from a Royal Navy corvette he made a successful belly-landing on Beachy Head. The aircraft was subsequently moved to RAE Farnborough for further examination and in August 1943 was taken to RAF Collyweston where its damaged engine, which had flown only for one and a half hours, was replaced and the machine was restored to flying condition. Interestingly, when repainted in RAF camouflage and markings, the original white number and falling bomb emblem were retained.



190 on 7 July 1942. From now on, at least one 'tip and run' attack a day was planned or flown and as yet, the British had no means of effectively countering them.

On 17 July 1942, disaster struck 10./JG 2. Four Fw 190s took off to carry out an 'armed reconnaissance in and around Torquay' and what exactly happened during the attack was never explained by the surviving German pilots, with one of the four fighter-bombers failing to return. Nearly two months later, a badly decomposed body was found in the sea and after investigation proved to be that of Frank Liesendahl. His loss was understandably great for both his *Staffel* and the *Luftwaffe*'s small yet potent *Jabo* force. Nevertheless, the tempo of attacks did not falter. *Oblt* Fritz Schröter, one of 10./JG 2's experienced pilots who had just moved to take command of 10./JG 26, assumed command of his old *Staffel* and command of 10./JG 26 was given to *Oblt* Joachim-Hans Geburtig. 12 days later, Geburtig was shot down attacking shipping in the Channel and command of 10./JG 26 passed to *Lt.* Paul Keller who was soon to earn the nickname '*Bombenkeller*'.

Seen at Caen-Carpiquet loaded with an SC 250 bomb, this Bf 109 F-4/B, 'White 2', W.Nr. 8352 of 10.(Jabo)/JG 26, was flown by Fw. Otto Görtz during a Jabo mission to the Bournemouth area on the evening of 6 June 1942. During the attack, this aircraft was shot down by anti-aircraft fire and Fw. Görtz was killed. Note that on the bomb silhouette on the rear fuselage, sprayed highlights have been added in an attempt to accentuate its shape.

Meanwhile, further west, in addition to shipping and coastal targets, the pattern of targets attacked by 10./JG 2 now showed a shift towards specific inland targets starting with Yeovil in Somerset on 5 August. Three civilians were killed and 25 suffered varying degrees of wounds. 15 buildings were totally destroyed and a further 972 suffered varying degrees of damage due to the bombs; a further 67 were damaged by gunfire. Two days later, 10./JG 2 repeated the success of the Yeovil attack by attacking Bodmin and Constantine in Cornwall. There would be one more attack by 10./JG 2 against targets well away from the coast when on 11 August, two aircraft attacked the cathedral city of Salisbury in Wiltshire. These attacks further reinforced the inability of the British defences to combat these 'lightning nuisance' attacks, as the Salisbury raid was described.

Following the excitement of the Dieppe Raid of 19 August 1942, during which the *Jabos* of 10./JG 2 and 10./JG 26 were actively and successfully involved, there was a brief pause in 'tip and run' attacks but it was not long before they restarted with a vengeance. However, October 1942 saw a reduction with Kent and Sussex receiving the brunt of the attacks and it was now that the RAF assigned a new weapon to counter the 'tip and run' raiders.

The Hawker Typhoon had been introduced into service in early summer 1942 and so far had proved to be a bit of a disappointment, even though its full potential had not yet been realised. In August 1942, the commanders of the three Typhoon squadrons complained that the Spitfire, not the Typhoon, was better used on offensive sweeps whilst the Typhoon's superior speed and fire power would be better used countering 'tip and run' Fw 190s and therefore basing the three squadrons near the eastern, south-eastern and south-western coasts. This was accepted and by the end of September 1942, a total of five Typhoon squadrons were employed in this manner.

The *Jabos* carried out an attack on 31 October 1942 which would yet again prove to be an embarrassment to the British. Adolf Hitler was becoming increasingly annoyed by Bomber Command's offensive and apparently ordered a full strength vengeance attack which was aimed against Canterbury. It was intended that this should be the biggest *Jaboangriff* to date and therefore 10./JG 2 and 10./JG 26 were to operate at full strength. The two *Jabostaffel* were further reinforced by *Jabos* from II./JG 2 as well as an unknown number from III./ZG 2.

The attack was yet another success. The German formation joined up over Calais and headed north at zero metres, maintaining complete radio silence. The fighter escort were instructed to remain close and only to climb when they had attacked the target. The formation approached the Kent coast at wave-top height in three waves, crossing near Deal, then hedge-hopped towards the outskirts of Canterbury where they climbed, dropped in the region of 31 bombs which killed in the region of 30 people and damaged countless buildings, and then streaked back for France. British defences claimed to have shot down 10 fighter-bombers and suspected a further aircraft had been destroyed when it hit a balloon cable but actual losses were much less - one shot down and one damaged. To add further embarrassment, during the dogfights that followed, two Spitfires were shot down and a Typhoon was lost to friendly fire.

The attack of 31 October 1942 was the last 'tip and run' attack of any note for over a month as on 8 November 1942, American forces landed in north-western Africa and the Germans immediately moved fighter units, including both *Jabostaffeln*, to southern France. 10./JG 2 had returned to northern France by 12 December 1942 and probably flew its first *Jaboangriff* on 14 December against military targets north-west of Lulworth in Dorset. 10./JG 26 had apparently returned from Istres on 11 December and its first recorded attack was on 19 December from which its new *Staffelkapitän, Oblt.* Kurt Müller, did not return; *Oblt.* Paul Keller, who had in the meantime been awarded the *Deutsches Kreuz in Gold,* was recalled from 4./JG 26 to take command of the *Jabostaffel*.

Hptm. Heinz Schumann became Staffelkapitän of 10.(Jabo)/JG 2 in December 1942 when the unit was equipped with the Bf 109 F. This view of Schumann was taken in March 1943, after the Staffel had converted to the Fw 190, and shows the unit emblem, a red-brown fox with a grey ship in its mouth.

With the start of the new year, 'tip and run' attacks began again on 2 January 1943 and it is clear that by now, many of the *Jabo* attacks were starting to be directed against non-military targets. In May 1942, a captured *Jabo* pilot from 10./JG 26 made mention that some of the targets attacked were '*cows, cyclists, motor buses and railway engines*' leading the interrogator to deduce that there was a lack of a defined bombing policy. However, another 10./JG 26 pilot later admitted that pilots:

"...have been given no specific objectives but have been told quite frankly to attack anything and everything liable to terrorise the British public. Trains, motor buses, gatherings of people, herds of cattle and sheep, etc., have been mentioned specifically at the briefing as likely targets..."

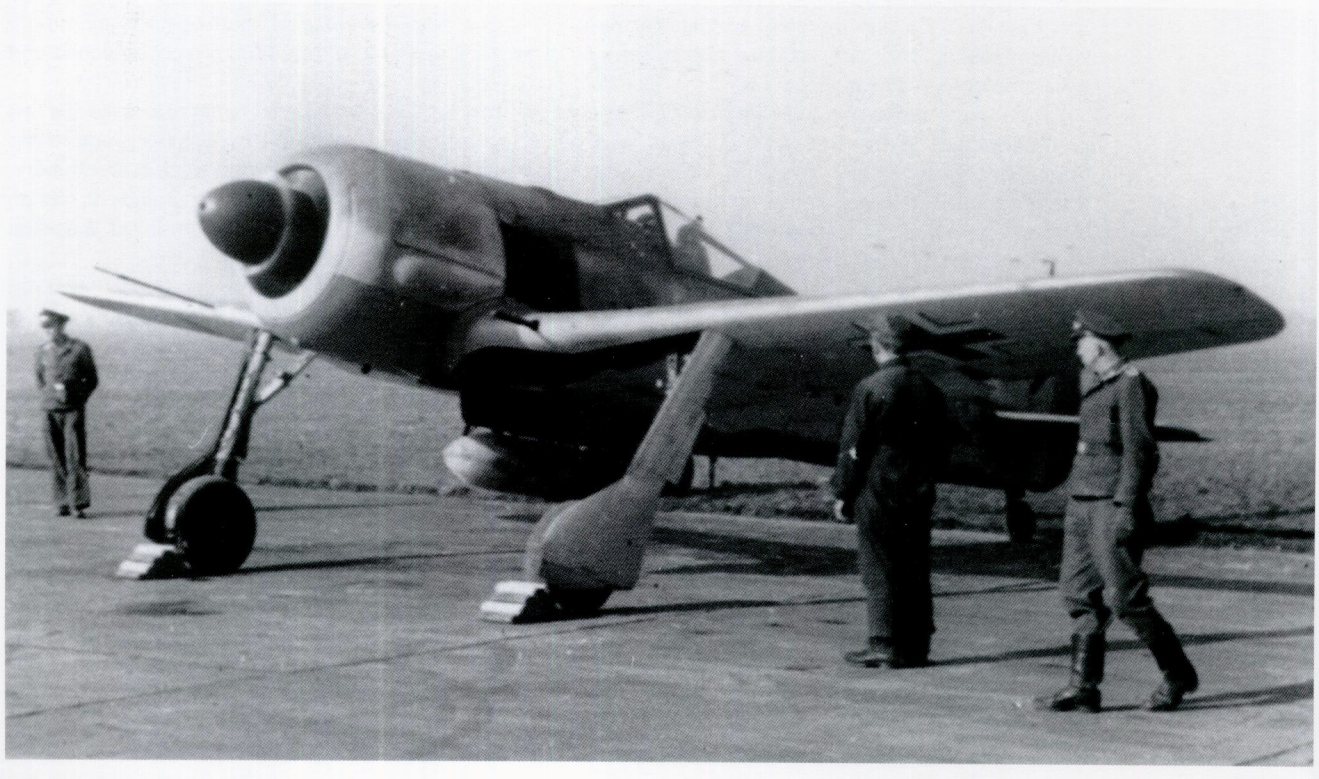
On the morning of 18 January, *Hptm.* Heinz Schumann, the new *Staffelkapitän* of 10./JG 2, led about 10 aircraft from his *Staffel* to St. Omer to join 10./JG 26. This move was apparently in preparation for a reprisal attack on a major British town for the Bomber Command attacks against Berlin on the nights of 16 and 17 January 1943. However, weather now intervened and the attack did not occur until 20 January.

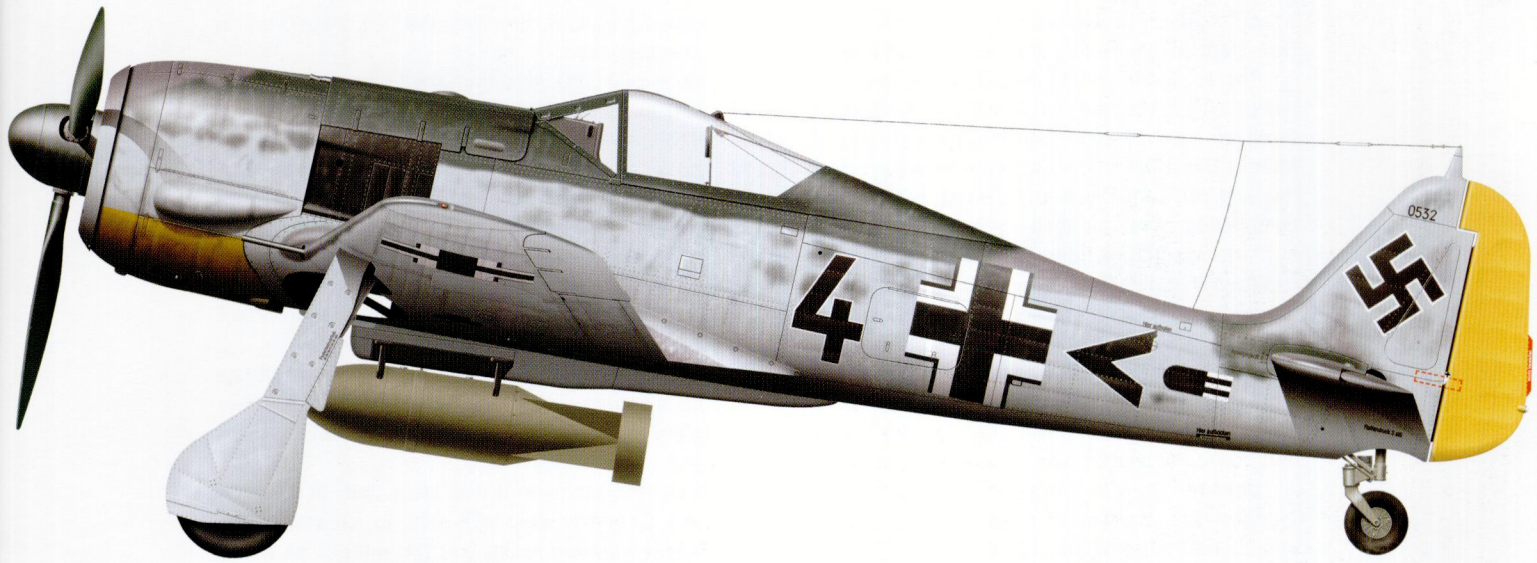
The tactics to be employed were involved but effective. Two Fw 190s from 10./JG 2 would carry out a diversionary *Jabo* attack against Ventnor on the Isle of Wight. Then 10 minutes later, 10 Messerschmitt 109s of *Einsatz Staffel (Jabo)/Jagdgruppe Süd,* together with a number of experienced pilots from *Jagdgruppe Ost,* would take off with a close escort of eight Fw 190s to carry out a diversionary attack against Tunbridge Wells. At the same time, 28 *Jabos* would take off, together with a close escort of eight Fw 190s to attack London, flying in at low level in close formation and to carry out a *Terrorangriff,* bombing anything that they saw. In order to further draw the RAF fighters away, 29 Fw 190s and 10 Messerschmitt 109 Gs would carry out a diversionary sweep to the east of the Thames Estuary and would then escort the *Jabos* home.

At 1222 hours, in the region of 34 Fw 190s crossed the coast at zero metres between North Foreland and Beachy Head, thus fanning out over a wide area of Kent and East Sussex. At 1230 hours, 28 *Jabos* were over south-east London flying at heights of 18 to 30 metres. The balloon barrage in this area of London had just been brought down for maintenance during the lunch hour and most of the inhabitants of that part of London were going to or were at lunch; they were unaware of an attack until the first bombs exploded and only then did the sirens sound, by which time it was too late.

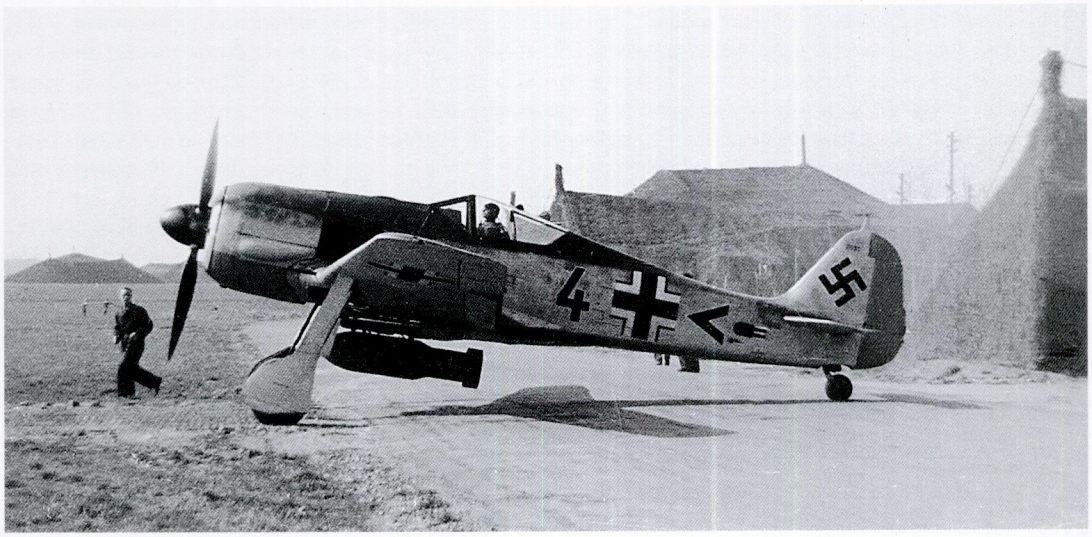
With impunity, the fighter-bombers dropped their bombs and strafed buildings before heading south. A gas holder was set alight, the Royal Naval College at Greenwich was hit as were the Deptford West Power Station and Surrey Commercial Docks. To add insult to injury, the Germans also shot down 10 barrage balloons, the barrage being hurriedly winched back up during the attack. The loss of life was high and the effect on morale considerable. At Sandhurst School, 38 children and six teachers were killed whilst at least

A bombed up Fw 190 of 10./JG 26 does some engine runs at St. Omer Wizernes, in early 1943 prior to a mission. Just to the rear of the fuselage partly obscured by the ground crewman can be seen 10./JG 26's black and white bomb symbol.





Focke-Wulf Fw 190 A-5 'Black 4' of 10.(Jabo)/JG 54, France, early 1943
Finished in a high demarcation scheme of RLM 74 and 75 over RLM 76 undersurfaces with minimal fuselage mottling, this aircraft is typical of the Focke-Wulf fighter-bombers operated by this unit in early 1943. All aircraft of the Staffel seem to have had the chevron behind the Balkenkreuz which, together with the stylised black and white bomb, characterised the aircraft of this unit in much the same way as the more extensively used black triangle characterised the Schlachtgruppen. Note that the outer wing cannon have been removed.



The Fw 190 was considered better suited than the Bf 109 F for fighter-bomber work because of its good speed and manoeuvrability at low altitudes and the fact that its air-cooled engine made it less sensitive to hits. Although the bomb racks were easily detachable for operations in the purely fighter role, they were not always removed in practice as their effect on performance was not very great. The 250 kg bomb, on the other hand, considerably affected manoeuvrability and reduced speed at ground level by some 48-56 k/ph. These photographs show 'Black 4' of 10.(Jabo)/JG 54, which officially came into existence on 17 February 1943 when 10.(Jabo)/JG 26 was re-designated.

a further 26 civilians were killed and countless more injured in Sydenham, Brockley, Catford, Deptford and Downham and many buildings and vehicles were destroyed and damaged.

The *Luftwaffe* lost 11 fighters during the attack, including one Fw 190 *Jabo* from the London attack and two Bf 109 *Jabos* from the diversionary attack with seven pilots killed or missing, three prisoners of war and three wounded. Fighter Command fared better - just two Spitfires were shot down and a Mustang lost to friendly fire. However, so serious were the after-effects of the attack that, for the first time, the problem of 'tip and run' attacks was debated in the House of Commons. A petition was signed by local residents complaining about the inability to prevent this attack and questions were asked why the defences were down and what was being done to combat 'tip and run' attacks. All of this still did not alter the fact that Britain's capital city had been bombed in broad daylight by a force which penetrated nearly 161 km at high speed and low-level into enemy territory and still managed to drop its bombs on to recognised targets with good effect and then returned virtually unscathed.

Attacks for the remainder of January 1943 were quite uneventful for the German pilots and probably as a result of the weather, evidence can be found of just 12 attacks carried out by both *Jabostaffeln* in February 1943; even these 12 attacks had the desired effect - the defences were generally helpless to prevent them and public annoyance was increasing.

Despite the lack of missions, the *Jabostaffeln* were still suffering losses. It was clear that, at last, the Typhoon was starting to prove itself at low-level, even if the Germans were still slow to recognise and appreciate their new foe. Typhoons had accounted for five fighter-bombers in the first two months of 1943; light anti-aircraft fire a further three. However, all eight aircraft were shot down after dropping their bombs.

In March 1943, a number of changes began to occur to the *Jabostaffeln* which affected both the numbers and designations of the *Luftwaffe's* fighter-bomber units on the Western Front. The first change had already affected 10./JG 26 - on 17 February 1943, it had been re-designated 10./JG 54 and remained at St. Omer-Wizernes when the remainder of the *Geschwader* moved temporarily to the Eastern Front, exchanging with JG 54.

The other changes were more substantial and permanent. First of all, the numbers of fighter-bombers participating in 'tip and run' attacks increased dramatically. The first such attack took place on 7 March 1943 when in the region of 18 aircraft from both *Jabostaffeln* attacked Eastbourne just after midday, killing 14 civilians and seven servicemen. Amongst the normal 10./JG 2 and 10./JG 54 pilots flying on this mission were a number from a new fighter-bomber unit who were there to gain combat experience. In December 1942, it had been decided to form a dedicated fighter-bomber *Geschwader - Schnellkampfgeschwader* 10 (SKG 10). The first *Gruppe* to be declared operational was *Hptm.* Fritz Schröter's III./SKG 10 (formerly III./ZG 2) which continued to operate in North Africa. I and II *Gruppen* were also formed, albeit on paper, at the end of December 1942 and appear to have been physically formed in February 1943. At least two II./SKG 10 pilots took part in the Eastbourne attack, attached to 10./JG 2, and on the following day it is believed that 7./SKG 10 carried out its first 'tip and run' attack.

Attacks for the remainder of March 1943 resorted to using the usual number of fighter-bombers, the first of which was against Frinton and Walton on the Naze by 10./JG 2 on the afternoon of 14 March 1943. The change to the *modus operandi* occurred on 23 March when 20 *Jabos* attacked Bournemouth and a day later it was decided to fly another mass *Jaboangriff.*

The chosen target this time was Ashford in Kent, a major railway junction. Again, both of the experienced *Jabostaffeln* participated, with *Oblt.* Paul Keller leading the first wave. The attack on Ashford was devastating, resulting in the county of Kent's greatest number of civilian casualties as a result of an air attack for the whole of the war - 51 killed, 76 badly wounded and 78 suffering lesser wounds. It was thought that the Germans lost more aircraft to RAF fighters on the way back; the truth is entirely the opposite. Two Spitfires of 91 Sqn were patrolling exactly where the *Jabos* were transiting, headed for France and were bounced by 5./JG 26 who were covering the *Jabo's* retreat; although the RAF claimed two German aircraft, the *Luftwaffe* just suffered the one loss - Paul Keller, whose fighter-bomber exploded over Ashford as a result of *Flak.*

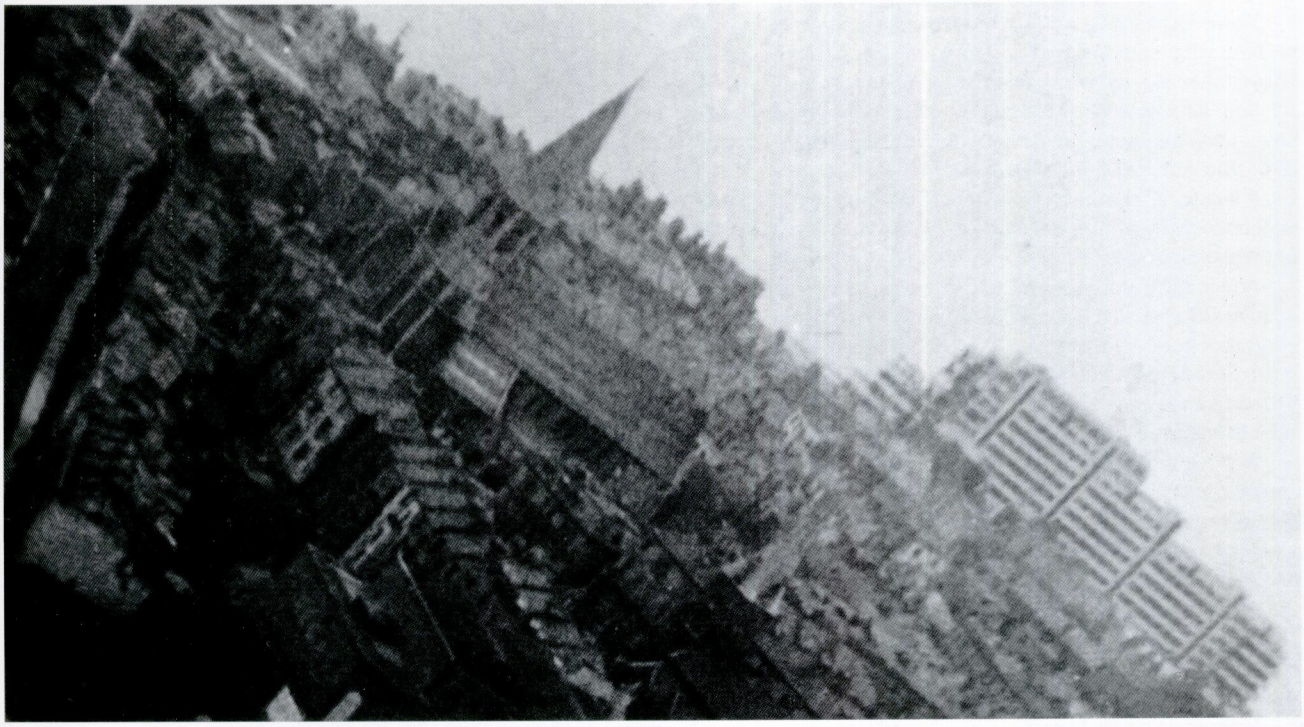
April 1943 would see yet more changes to 10./JG 2 and 10./JG 54. Heinz Schumann was given command of the newly formed IV./SKG 10 - 13. *Staffel* would be formed from 10./JG 2, 14. *Staffel* would be formed from 10./JG 54 and 15. *Staffel* would be formed from the remainder of the original *Jabostaffeln.*

The attack of 7 April 1943 against Newport on the Isle of Wight is recorded as being the first carried out by 13./SKG 10. The target was attacked spectacularly before most of the town's inhabitants were awake, costing the lives of 16 with nearly 217 suffering various injuries; damage and destruction to buildings was considerable. However, for the Germans, the attack was not as easy at it appeared as two pilots were killed, one shot down by *Flak*, the other by a Typhoon of 257 Sqn.

What would turn out to be the final 'tip and run' for over a month was against Folkestone on 9 April 1943 and was not without incident for both sides. Described by the *Luftwaffe* as a *Störangriff*, four fighter-bombers from 10./JG 54 attacked Folkestone, killing three, injuring 20 and damaging 286 houses. However, one *Jabo* was lost on the return flight and during the ensuing air-sea rescue mission, two German fighters and one *Jabo* aircraft were shot down by RAF fighters without loss.

There would be just 16 more 'tip and run' attacks between 7 May and 6 June 1943 but these attacks would involve much greater numbers of fighter-bombers and would pose an even greater, if not short-lived, threat to southern Britain.

Pilots of 13/SKG 10 seen at Caen-Carpiquet, May 1943. 3rd from left is the Staffelkapitän, Lt. Leopold Wenger, who would later be awarded the Ritterkreuz but would be killed in action with 6/SG 10 on 10 April 1945. They stand in front of Wenger's 'Blue 12', the markings carried on his Fw 190 whilst with 10./JG 2. Following the formation of IV/SKG 10, letters replaced numerals and it is believed that 'Blue 12' became 'Blue E'. Note the dense liberal application of the mottling on both Focke-Wulfs, no doubt ideal for their operations low over the Channel and the south coast.



The view from the cockpit of Lt. Leopold Wenger's Fw 190 of 10./JG 2 during an attack on Hastings, 1530 hrs 11 March 1943. Both 10./JG 2, 10./JG 54 and elements of II/SKG 10, 27 aircraft in all, were involved in this attack which killed 38, seriously wounded 39 and wounded 51 civilians, as well as destroying 40 houses and blocking the railway line. Just one Fw 190 from 6/SKG 10 was lost to Flak. The church in the foreground is Christ Church, London Road whilst in the distance is the Marine Court at St Leonards which has suffered a hit from a previous raid - note the collapsed floors on the left edge of the building.

The dramatic reduction in 'tip and run' activity did not go unnoticed by the British and although no obvious reason could be given for it, the British still saw 'tip and run' attacks as wholly successful. By the middle of April 1943, *Luftflotte* 3 had nearly 120 fighter-bombers available to attack Britain. The British were unaware of this massive force of fighter-bombers and if the *Luftwaffe* had utilised them in a similar tactical manner to the 'tip and run' raids of the previous 13 months, the British defences would have had considerable difficulty in countering them. Crucially, the *Luftwaffe* High Command, probably due to incomplete intelligence, now persisted in the belief that daylight *Jabo* missions had not achieved the desired effect and therefore the vast majority of *SKG* 10 would continue to be trained for nocturnal attacks, to the incredulity of many of the experienced *Jabo* pilots.

On 7 May 1943, daylight attacks recommenced when II./*SKG* 10 attacked new targets - Great Yarmouth and Lowestoft in East Anglia. Both attacks were carried out simultaneously by 20 and 12 fighter-bombers respectively in an attempt to split the fighter defences and to try to catch the defences unaware. Both aims were achieved and the fact that Great Yarmouth and a nearby radar station were under attack was not evident to the British until the first bomb exploded. The Germans would have also got away unscathed if one pilot had not collided with a telegraph pole and his fighter-bomber cartwheeled into the sea.

A similar attack by II./SKG 10 four days later was equally successful and only by luck was the RAF able to intercept. Despite anti-aircraft guns claiming one more aircraft and the RAF claiming to have shot down one and damaged another fighter-bomber, there was only one German casualty. Again, the British defences had failed to prevent this attack which resulted in 49 deaths, 24 of them female soldiers whose billet on the seafront at Great Yarmouth took a direct hit.

The following day, II./SKG 10 were back again - this time 13 of them attacked Lowestoft and shipping off the coast early in the morning. One of the bombs dropped on the town bounced 150 yards, eventually exploding, killing five and severing the Observer Corps' 'Imminent Danger' link. This was crucial as nearly 12 hours later, Lowestoft was attacked again and because the link had been severed, no warning was given to the town and its inhabitants. In the region of 25 fighter-bombers approached the coast, attacking the harbour and the north of the town, destroying 51 houses, seriously damaging 90 and damaging another 225. 32 people were killed, 23 seriously injured and 28 suffered minor injuries.

After a brief interlude, on 23 May 1943 the *Jabos* were back with II./SKG 10 attacking Hastings whilst simultaneously, IV./SKG 10 attacked Bournemouth. The British defences were all but overwhelmed by the two well co-ordinated attacks, even if the attack on Hastings was not a total surprise and II./SKG 10 lost two fighter-bombers.

Further west, IV./SKG 10 was carrying out an identical attack on Bournemouth just four minutes after the first bombs exploded at Hastings. Just one aircraft was lost but in the region of 59 buildings were destroyed and 3,442 damaged. The exact figures of casualties are hard to ascertain but 34 RAF and RCAF personnel were killed or reported missing with an additional 38 wounded or injured. It is believed that 77 civilians also lost their lives.

Two days later, the *Luftwaffe* tried attacking two more coastal towns. At midday, IV./SKG 10 attacked Brighton where 24 people were killed, 58 seriously injured and another 69 suffered lesser injuries. Damage to the town was considerable and despite the optimistic claims of the anti-aircraft gunners shooting down four fighter-bombers and RAF fighters claiming one, there was only one lost.

However, the second attack of the day, carried out by the less experienced II./SKG 10, was a failure and showed what could happen if fighter-bomber attacks were successfully intercepted. The intended target was Folkestone and as the formation approached the coast, they were detected and the warning passed to 91 Sqn. who claimed to have destroyed four fighter-bombers. Despite being instrumental in thwarting what could have been another devastating attack, the only aircraft shot down was that flown by the *Staffelkapitän* of 6./SKG 10, *Oblt.* Josef Keller.

It would be another five days before both II and IV./SKG 10 ventured forth again. Yet again targets were chosen well away from each other – II. *Gruppe* would attack Frinton on Sea and Walton on the Naze in Essex in the evening whilst IV *Gruppe* would attack Torquay.

At midday at Torquay on 30 May 1943, 21 bombs were dropped throughout the town, killing 45, seriously injuring 80 and slightly injuring another 77. At least 50 buildings were destroyed and over 3,250 suffered varying degrees of damage. Five RAF personnel were also killed and a further 11 wounded. By far the worst incident was the bombing of a church which resulted in the deaths of 21 children. From a German viewpoint, it had been both a successful and costly attack. German losses during this attack were much higher than normal with four pilots being killed and one taken prisoner.

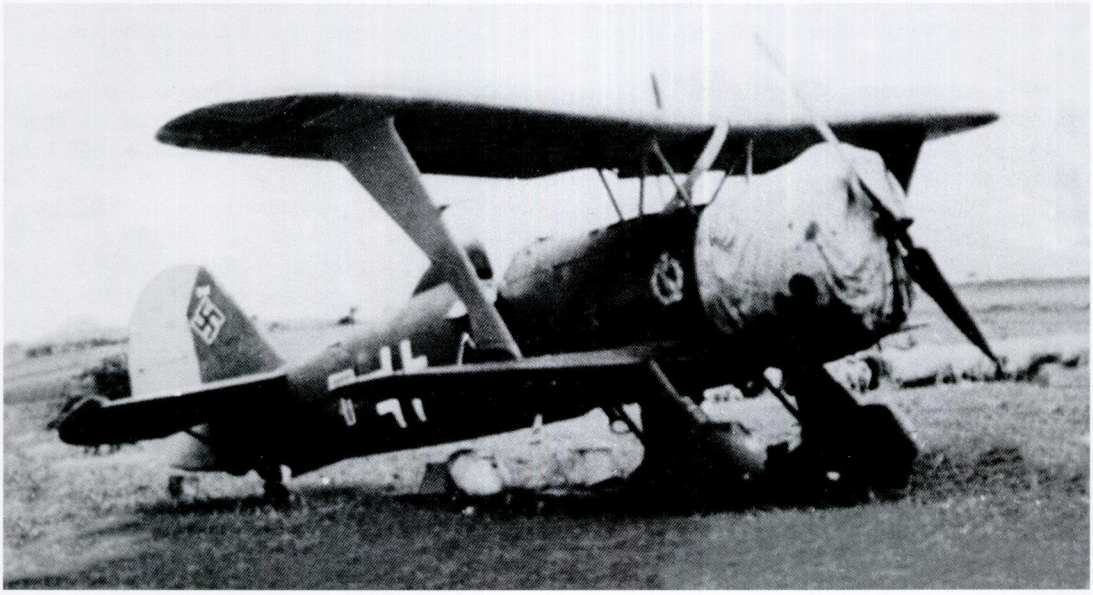
At dusk that same day, it was the turn of II *Gruppe* to attack Frinton and Walton on the Naze. Again, the alert was not sounded as there had been a breakdown in the system. 20 bombs exploded in and around the two towns killing six and injuring 21, badly damaging the electricity transformer at Walton, disrupting gas and electricity supplies at three locations, damaging the main sewers, destroying six houses, badly damaging another 21 and slightly damaging hundreds more. The attackers did not get away without loss and despite the anti-aircraft gunners claiming they had shot down five fighter-bombers, only two were lost.

On 1 June 1943, both *Gruppen* struck again. First of all, 13./SKG 10 attacked the western part of the Isle of Wight just before midday and then II./SKG 10 attacked Margate 90 minutes later; the latter was assessed by the British as being 100 per cent effective and damage was extensive.

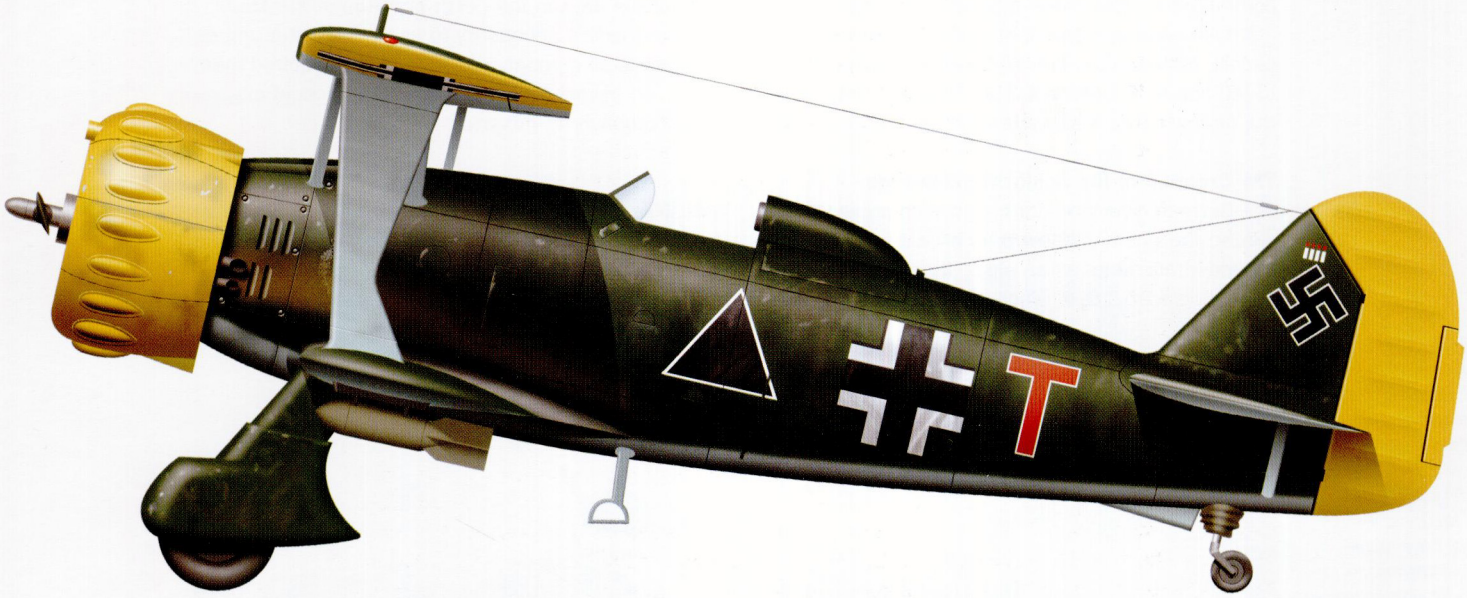
Early the following morning, II./SKG 10 struck again, this time against Ipswich in Suffolk but after this, only two more 'tip and run' attacks would occur, both of them being aimed at Eastbourne and classed by the British as 100 per cent effective. The first attack took place just before midday on 4 June 1943 and would be the last attack flown against the United Kingdom by IV./SKG 10. In addition to the extensive damage caused to the town by bombs and machine gun fire, seven civilians were killed and 33 suffered varying degrees of injury. Two Spitfires of 41 Sqn claimed an Fw 190 destroyed and another damaged but just one was lost. The second attack occurred two days later and was carried out by II./SKG 10. It was a classic 'tip and run' attack and considerable damage was caused by bombs at 14 locations throughout the town whilst considerable additional damage was caused by machine gun fire. Just one German aircraft was lost.

Southern Britain yet again counted the cost and waited for the next attack, wherever and whenever that would be. However, the *Jabos* did not come and the longer Britain waited, the clearer it became that as suddenly as they had started, inexplicably 'tip and run' attacks had finished. After 15 months, the campaign was over.

Plans were under way for the invasion of the Soviet Union to be carried out in the early spring of 1941. However, prior to this event it was deemed necessary that bases be set up in the bordering countries of Bulgaria and Rumania, the latter being of paramount importance in order to protect the oil supplies required by the Reich. The operations in the Balkans commenced on 31 March and were completed around 23 April. For a more detailed account of these events see 'Classic Colours, Jagdwaffe Volume Three, Section 1, Strike in the Balkans April-May 1941 and Stuka Volume One 1939-1941'. The unforeseen result of these operations was that the attack on the Soviet Union was delayed by more than two months which would prove costly to the Germans in the forthcoming winter setbacks.



Although Ju 87 Stuka units belonging to St.G 2 and St.G 77 were heavily involved in the successful outcome of the campaign in the Balkans there were no Schlachtflieger units at this time and operations were carried out by Bf 109 Es fitted with bombs under the fuselage operated by specific Staffeln within each Jagdgeschwader. However an exception to this was 10./LG 2 which used Hs 123s in the ground-attack role. The aircraft shown in this photograph taken in Greece, prior to the unit being transferred to Rumania in preparation for the 'Operation Barbarossa'. A distinctive marking on all Luftwaffe aircraft operating in the Balkans, was that many had their rudders and cowlings painted yellow and this machine would clearly have been painted in this way.



Henschel Hs 123 A-1 of 10./LG 2 in Greece, end of April 1941

Coded red 'T' outlined in white, this aircraft also carried the Schlacht unit marking of a black triangle outlined in white as well as the assault badge painted in white behind the engine cowling, which continued to be used extensively by future dedicated Schlachtgeschwader units. The rudder and engine cowling were painted yellow, as were the undersides of the outer wing tips of the upper wing over which was painted the Balkenkreuz. Although unreadable the Werknummer was painted in white above the Hakenkreuz.

The *Schlachtflieger* on the Eastern Front

by Martin Pegg

The First Six Months in Russia

When German forces launched Operation *Barbarossa* and attacked the Soviet Union in the early hours of 22 June 1941, the *Luftwaffe's* only specialised ground-attack force still comprised of a single *Gruppe*, II.(*Schlacht*)/LG 2 under *Major* Otto Weiss. This *Gruppe*, comprising three Bf 109 E *Staffeln* and one of Hs 123s, remained an important part of VIII. *Fliegerkorps*, itself part of *Generalfeldmarschall* Albert Kesselring's *Luftflotte* 2, which had been assigned to Army Group Centre to support the drive towards Smolensk.

In the first few days of *Barbarossa*, the *Schlachtgruppe* supported 9. *Armee* and III. *Panzergruppe* and was heavily committed in the initial breakthrough of the border fortifications and the advance east and south-east of Suwalki. The main effort was devoted to attacks on Soviet airfields, communications and troop concentrations in the area between the Polish-Russian border and Minsk.

Early in the campaign, the *Gruppe* was involved in the encirclement at Bialystock, where the first gigantic battle of annihilation on the Eastern Front was in progress. During these operations, the Hs 123 *Staffel*, led by *Hptm.* Bruno Meyer, was briefed to attack heavy armoured forces in woodland. The targets, however, were difficult to see and the attacks were only moderately successful. After expending all of its bombs, the *Staffel* was making its way home over the front line at low level when Meyer spotted German and Soviet tanks locked in a fierce battle. The armoured vehicles were firing at each other at close range, their shells glowing like tracer as they flew towards their targets or ricocheted into the air.

Unable to summon reinforcements, Meyer decided to attack, although the pilots now had only the use of their two 15 mm machine guns. Incredibly, however, after the first strafing pass, the tank crews sensed the new danger and ceased firing. After climbing to 900 metres in order to obtain a better view of the battle below, the Hs 123s dived steeply towards the tanks. As they did so, each of the pilots pressed a button on his throttle which increased the engine revolutions to 1,800 and the aircraft's speed by some 30 km/h. The increased propeller revolutions produced a deafening roar which so alarmed the Soviet tank crews that repeated dives caused them to disengage and gradually withdraw. Pursued by the diving Hs 123s, the tanks were eventually driven into marshland where 48 of them became bogged down and were abandoned.

For most of July the *Gruppe* flew in support of the battle for Smolensk, which fell on 5 August. The VIII. *Fliegerkorps* was then assigned northwards to *Luftflotte* 1 to strengthen the air forces flying in support of the advance towards Leningrad by Army Group North. The *Gruppe* remained with *Luftflotte* 1 until early October when the Germans redeployed their forces for the attack on Moscow. The II.(*Schlacht*)/LG 2 then took part in the battles to encircle a large pocket of Soviet troops near Vyasma, which was completed on 7 October, and then participated in the drive towards Kalinin. The Germans then attempted to isolate Moscow by means of attacks from the north and south. The Bf 109s and Hs 123s of the *Schlachtgruppe* were committed to both these attacks, flying sorties in the Dmitrov-Klin area in the north and Tula in the south.

It was during these operations that Soviet aerial opposition made it necessary to assign a fighter unit as escort. Although the ground-attack pilots had been trained in air-to-air combat, this would have required them to jettison their bombs and abort their primary mission. With an escort, however, the fighters could engage the enemy fighters and allow the ground-attack *Gruppe* to accomplish its mission.

The Creation of the Schlachtgeschwader

The German Army had not fought a campaign without close air support since 1939, but the *Luftwaffe's* Staff viewed the entire *Luftwaffe* as an aid to the Army and had failed to recognise the importance of dedicated ground-attack units as an aid to land warfare. As time went on, however, the undoubted successes achieved by II.(*Schlacht*)/LG 2 since the beginning of the war influenced the views of *General der Flieger* Hans

When the attack on Russia began in June 1941, II.(Schlacht)/LG 2 consisted of three Staffeln of Bf 109 Es and one reinforced Staffel comprising 20 Hs 123s. Here, a Bf 109 E is pictured behind the remains of a Soviet aircraft, many of which were destroyed by the Gruppe on the ground in the opening days of 'Barbarossa'.

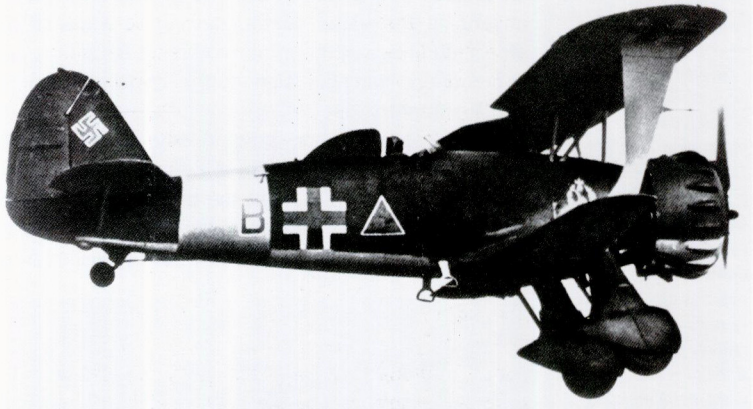
Jeschonnek, the *Luftwaffe's* Chief-of-Staff, and he ordered the creation of two specialised ground-attack* *Geschwader* to provide direct support for the Army.

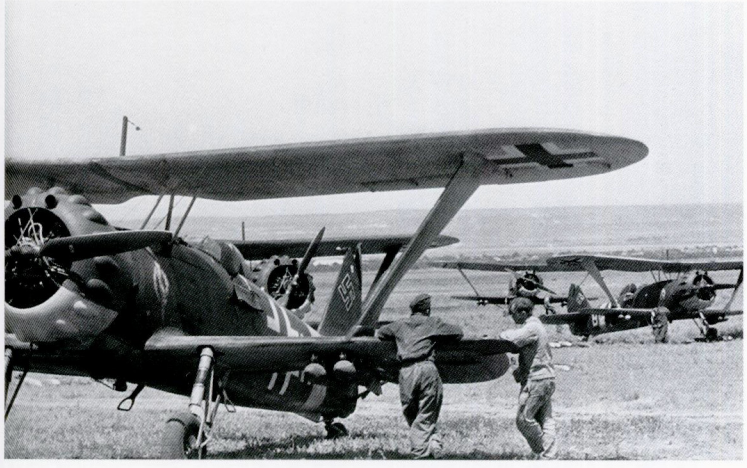
Although the *Luftwaffe* possessed aircraft capable of ground-attack since the start of the war, the framework within which these machines operated had never been as clear-cut as in the case of other units. Consequently, the role had been carried out by the *Jabo Staffeln* of *Jagdgeschwader*, as well as *Zerstörergeschwader*, *Schnellkampfgeschwader*, *Stukageschwader* and II./*Lehrgeschwader* 2, with the result that there was no uniformity in equipment or organisation. Equally importantly, the campaign in Russia had required the medium bombers of the *Kampfgeschwader* to become increasingly involved in direct Army support, so preventing them from carrying out their strategic missions behind the Front.

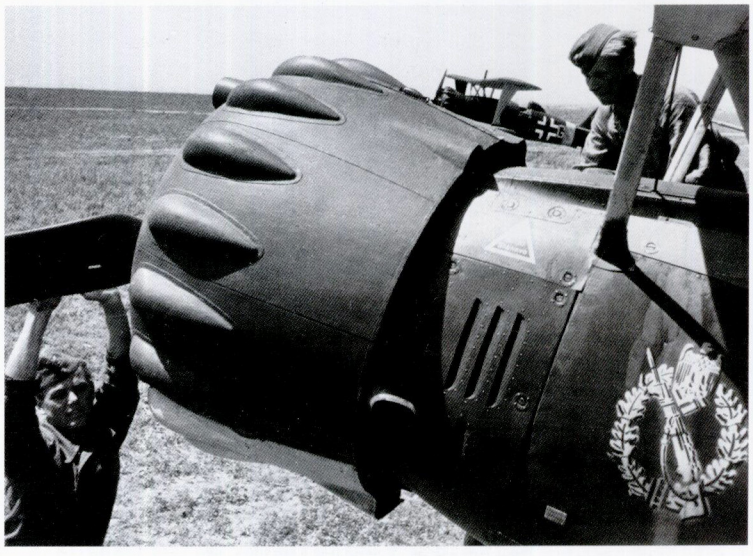
In December 1941, II.(*Schlacht*)/LG 2 was transferred to Dugino, situated north of Vyasma in Central Russia. Intending to take advantage of an anticipated lull in operations due to the Russian winter, it was planned to withdraw the *Gruppe* to Werl in Germany in order to create the I. *Gruppe* of a new ground-attack *Geschwader*. However, complete withdrawal proved impossible due to a surprise Soviet counter-attack which created a critical situation before Moscow and most *Staffeln* were compelled to remain at the Front until March 1942. The re-designation of the *Gruppe* continued nevertheless, and in January 1942 the aircraft and personnel of II.(*Schlacht*)/LG 2 formed a basis for the first complete ground-attack *Geschwader*, designated *Schlachtgeschwader* 1. The *Geschwader* was commanded by *Oberstleutnant* Otto Weiss and equipped with Hs 123, Bf 109 E and the new Hs 129 aircraft. The *Geschwader* comprised two *Gruppen*, I./Sch.G 1 under *Major* Alfred Druschel being formed from senior personnel of II.(*Schlacht*)/LG 2. The II. *Gruppe* was formed at Lippstadt under *Major* Paul Friedrich Darjes from a cadre of personnel of the training and replacement *Staffel* of II.(*Schlacht*)/LG 2, plus the Hs 129 development unit *Erprobungskommando* 129.

The composition of the *Geschwader* was unusual in that I./Sch.G 1 comprised the 1., 2. and 3. *Staffeln* with Bf 109 E-7s, but with the Hs 123-equipped 8. *Staffel* attached, while the 4, 5., 6 and 7 *Staffeln* comprising II./Sch.G 1 operated the Hs 129. After the *Geschwader* was brought up to strength and developed its battlefield tactics, the *Staffeln* were transferred to the Southern Sector of the Eastern Front where they were to operate under *Luftflotte* 4. Flying operations on this sector had been disrupted by the spring thaw, but with this over and the airfields drying out, the Germans were preparing for their 1942 campaign to capture the oilfields in the northern Caucasus. It was necessary, however, to cover the German right flank of this drive to the Caucasus, and the offensive therefore included

Although obsolescent at the beginning of the war, the Hs 123's adaptability, technical simplicity and ability to operate from primitive airstrips were hugely advantageous and the type proved to be a valuable part of the Luftwaffe's ground-attack arm. This example has a black triangle ahead of the fuselage Balkenkreuz and a black letter B outlined in white on the yellow fuselage band.







The Hs 123 was frequently able to continue operations when airfield conditions had grounded other types, operations from soft forward airstrips being facilitated by the removal of the undercarriage fairings, as shown on these machines of 7./Sch.G 1 photographed in Russia in 1942. Note the SC 50 bombs under the wings and the Infanteriesturmabzeichen stencilled on the forward fuselage. Although the Infantry Assault Badge became especially popular as an aircraft marking during the Russian campaign, it had earlier been used on the Hs 123s of II.(Schlacht)/LG 2 in Greece.

* Ground-attack is defined as air action against hostile targets in close proximity to friendly forces. It is particularly important when concentrated firepower is needed and response times are short. In offensive action, ground-attack can be especially effective to supplement friendly firepower, and in defensive action it may be the only means of providing fire support needed to counter enemy breakthroughs, counter-attacks, assaults and surprise attacks. As the *Luftwaffe* was quick to realise, the impact of ground-attack operations on morale could be even more important than the physical effects produced.

complete occupation of the Crimea. Consequently, parts of *Schlachtgeschwader* 1 operated in support of this offensive towards the Caucasus, while the remaining *Staffeln* were ordered to the Crimea.

Almost immediately following *Schlachtgeschwader* 1's operational debut, German Army commands began to praise the unit, their reports emphasising that, quite apart from the material support provided in bombing and strafing attacks, the morale and spirit of the soldiers was greatly raised whenever the ground-attack machines appeared.

Rarely has a more efficient use been made of an aircraft than in the case of the Hs 123. Although obsolete before the outbreak of war in 1939, this sturdy and highly-manoeuvrable machine proved a particular favourite and delighted soldiers who watched it hugging the contours of the ground and skimming over trees and bushes to make strafing and bombing attacks against points of resistance holding up the advance. Although simply referred to as the "One-Two-Three", it was also known as the *'Obergefreiter'* on account of the Vee-shaped struts between the wings which bore a slight resemblance to a corporal's stripe. German press reports of the time also described the Hs 123 as a 'flying machine gun nest' and, on account of its hedge-hopping activities, as the 'Hurdler'.

On several occasions in the East, the employment of the Hs 123s was crucial to success in important battles, and although the concentration of ever-larger masses of Soviet troops and, especially armour, far exceeded its capabilities, the dwindling Hs 123 inventory was viewed with great concern. With the production line at Schönefeld having closed down pre-war and the availability of spare parts a growing problem, all aircraft of this type still in existence were brought together and passed to the *Staffel* so that, during the advance from the Smolensk area via Viasma and Kalinin, more than 50 serviceable Hs 123s were on strength.

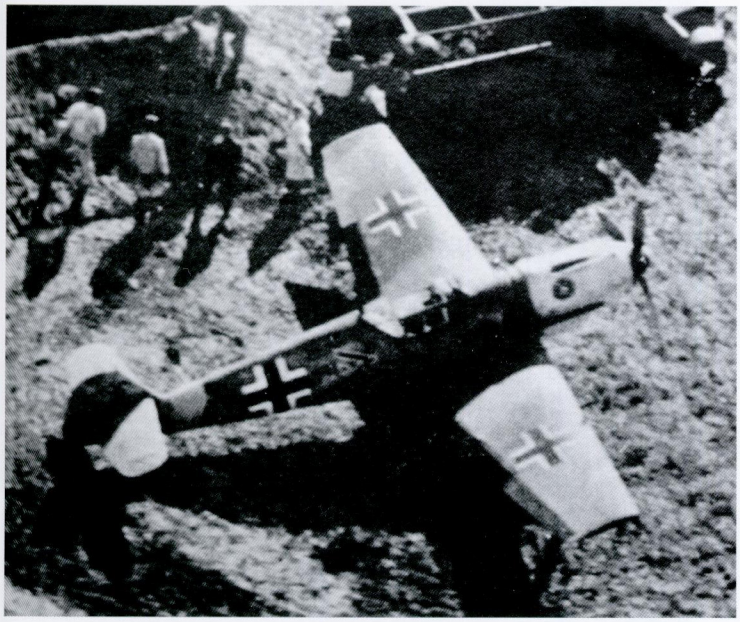
The introduction of the twin-engined Hs 129, was an important development and was viewed with some concern by the Soviets, especially after the first few machines were equipped with a 30 mm MK 101 cannon. Subsequently, these aircraft frequently came to the rescue of German troops who, surrounded by superior Soviet forces, had lost all hope of survival and viewed the intervention of the Hs 129s as little short of miraculous. A close bond with the ground forces developed among the pilots who, operating for long periods of time in the same sector, developed a sense of close comradeship with the ground troops. Soon, a stencilled image of the Infantry Assault Badge was painted on the fuselages of the *Geschwader's* aircraft as a proud and tangible sign of the especially true bond of solidarity which existed between the airman and the infantry.

For low-level ground-attack missions, the Bf 109 E had several disadvantages, the most important of which were its relatively light armament, its high flying speed and its great vulnerability to ground fire. Low-level attacks, which brought the aircraft within range even of small arms fire, were especially dangerous in any circumstances, but unlike the radial engines of the Hs 123 and Hs 129 which could absorb battle damage, the Bf 109 E was powered by a liquid-cooled engine and, although complete losses and pilot

During the winter of 1941/42, JG 54 flew 1,258 low-level and Jabo sorties between 1 November 1941 and 30 April 1942, during which it destroyed on the ground 26 aircraft, 155 locomotives, 35 goods wagons, 650 lorries and motor vehicles, 900 horse-drawn sleighs, combat vehicles etc, 10 tanks, 22 guns and two railway bridges. Additional attacks were made on troop emplacements and columns, plus a great number of railway sheds and stations. In this photograph, the Staffelkapitän of 9./JG 54, Oblt. Hans-Ekkehard Bob, poses with armourers and a 500 kg bomb.

A Bf 109 E-7 armed with four 50 kg bombs is directed to its take-off point.

A Bf 109 E-7 of I./Sch.G 1 shortly before beginning its take-off roll. Note the Schlacht triangle on the rear fuselage which continued in use until the end of April 1943 when, together with all unit badges, it was deleted by order of the RLM.



This Bf 109 E-7, marked with the black equilateral triangle of the ground-attack units and a black double chevron outlined in white, is believed to have been flown by Major Alfred Druschel, the Kommandeur of I./Sch.G 1. The Mickey Mouse badge on the engine cowling was originally the badge of 4./LG 2, but after the creation of Schlachtgeschwader 1 in January 1942, it became the badge of the whole Geschwader.

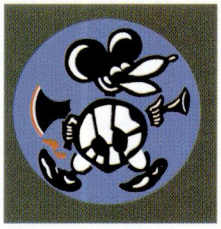
Left: Oblt. Georg Dörffel, the Staffelkapitän of 5./Sch.G 1, seated on the wing of his Bf 109 E-7. Clearly marked on the yellow engine cowling is the Geschwader's Mickey Mouse badge. Dörffel later became Kommandeur of I./Sch.G 1 and in May 1944, by which time he was a Major, he became Kommodore of SG 4 in Italy. He was killed north-west of Rome on 26 May following an attack on four-engined bombers. He was seen to bale out but, as his parachute did not open, he was probably struck by the tail of his Fw 190 F-8, W.Nr. 580464.

Above: Major Hubertus Hitschhold, the Kommodore of Sch.G 1, photographed on the Eastern Front in the summer of 1942. Later, when Oberst Dr. Kupfer was killed in a flying accident in November 1943, he was replaced by Hitschhold and, at the same time, the title General der Nahkampflieger was amended to General der Schlachtflieger. With this appointment, all ground-attack units were brought under a single control. Although it was planned to convert the Ju 87 units to the Fw 190 as soon as possible, Hitschhold considered that this and other improvements were all begun too late.

Left: Four well-known Ritterkreuzträger of the Schlachtflieger photographed in the early autumn of 1942 when they were all flying with Sch.G 1. From the left, they are: Georg Dörffel, Kapitän of 5. Staffel; Alfred Druschel, the Kommandeur of I. Gruppe; Josef Menapace, Staffelkapitän of 7./Sch.G 1; and Oblt. Heinz Frank, Kapitän of 3. Staffel. When Druschel was awarded the Oak Leaves on 3 September, he and the three Staffelkapitäne shown here had flown a total of more than 2,500 sorties. None of these men survived the war.

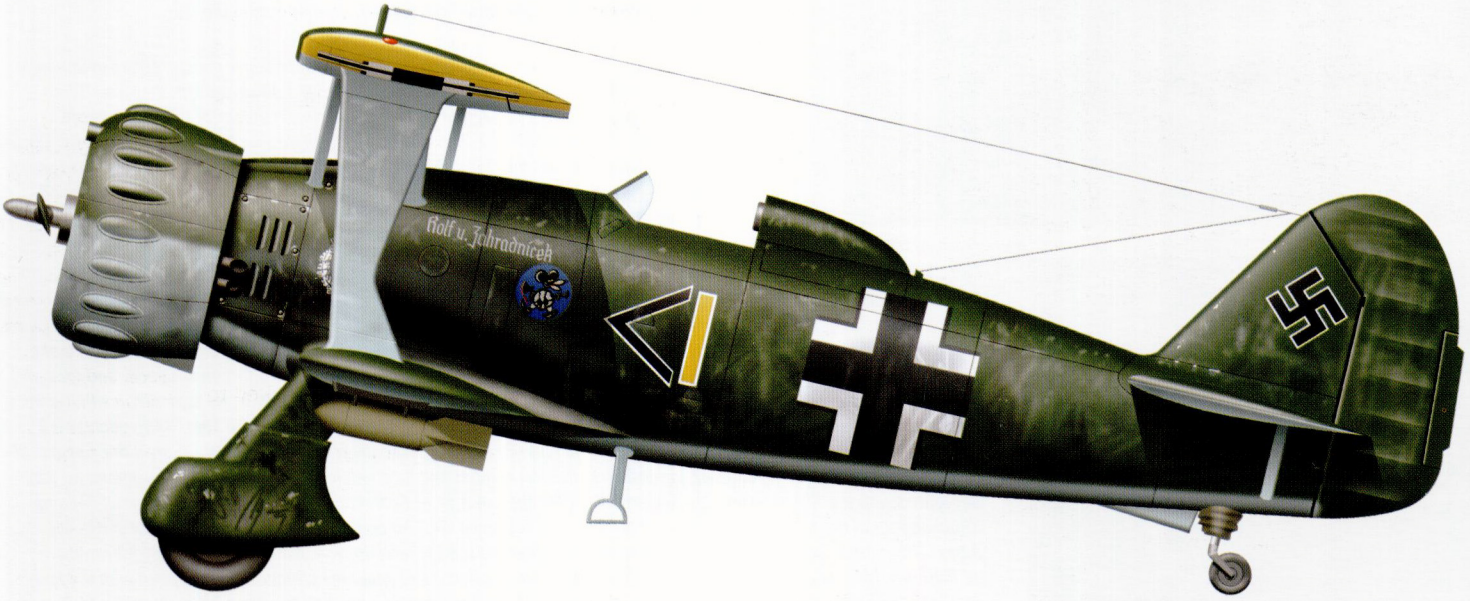
Left: Oblt. Alfred Druschel, the Kommandeur of I/Sch.G 1, shown in the cockpit of a Bf 109 E-7 in the summer of 1942. Druschel joined the Luftwaffe as an officer candidate in 1936, and by August 1939 was an Oberleutnant and Staffelführer of 6./LG 2, which, as part of the II.(Schlacht)/LG 2, was equipped with Hs 123s. During the Polish campaign, Druschel flew up to ten sorties a day and was awarded the EK II on 27 September 1939. During the French campaign, he took part in the famous attack at Cambai when II.(Schlacht)/LG 2 foiled a flank attack by enemy armoured forces at Cabrai, and took part in missions supporting the German advance to the English Channel. During the Battle of Britain, he took part in attacks on airfields in Southern England and in the later fighter-bomber missions against London. In April 1941, II.(Schlacht)/LG 2 operated in support of the Army in the Balkans, and with 'Barbarossa', the invasion of the Soviet Union in the summer of 1941, Druschel achieved such great success in individual combat and as a unit leader that, as an Oberleutnant, he was decorated with the Ritterkreuz on 21 August 1941. With the creation of Schlachtgeschwader 1, Oblt. Druschel became Kommandeur of the I. Gruppe in January 1942 and on 4 February 1942, he completed his 600th operational sortie. On 3 September 1942, Druschel, then a Hauptmann, was awarded the Eichenlaub. The award of the Swords followed on 19 February 1943 when Druschel had flown more than 700 missions, and when the squadron re-equipped with the faster and more powerful Fw 190 in the summer of 1943, Major Druschel became acting Kommodore on 11 June. On 14 August 1943, Druschel flew his 900th mission and continued leading the unit until it was disbanded on 8 October 1943. Subsequently, in order to make use of Druschel's considerable experience as a ground-attack pilot, the General der Schlachtflieger assigned him to his staff as Inspector of Schlachtflieger and on 31 May 1944, while on the Staff of the GdS, the 26-year old Druschel married 21-year old Ingaborg Pommeresch. On 25 December 1944, he returned to operational flying and took command of SG 4, but went missing during Operation 'Bodenplatte' on 1 January 1945. According to his daughter, Ostrid, in the 1980s, during the construction of a sports stadium near Aachen, the remains of an aircraft were excavated in the area where Druschel was last seen. Although official confirmation is lacking, it seems certain that this was Druschel's. Fw 190 F-8, W.Nr. 584400.

In August 1942, Lt. Josef Menapace, the Staffelkapitän of 7./Sch.G 1, was awarded the Ritterkreuz after completing his 650th operational sortie flying the Hs 123. These photographs show Menapace with one of his aircraft, this example being marked with a chevron and vertical bar. Note also the Infanteriesturmabzeichen and the Mickey Mouse badge of II./Sch.G 1 stencilled on the forward fuselage. The name under the cockpit is to commemorate Menapace's comrade and fellow Austrian, Lt. Rudolf von Zahradniczek, son of Feldmarschalleutnant Karl von Zahradniczek, who was killed when his machine was shot down by Soviet anti-aircraft fire and crashed behind enemy lines near Rzhev in Central Russia on 4 February 1942. Later promoted to Hauptmann, Menapace became Staffelkapitän of 1./Sch.G 1 but was killed on 6 October 1943 when his Fw 190 A-6, W.Nr. 550432, crashed and burned after being shot down by Soviet light anti-aircraft fire.



Mickey Mouse badge of II./Sch.G 1.

Infanteriesturmabzeichen infantry assault badge.



Henschel Hs 123 A-1 of 7./Sch.G 1

As flown by Lt. Josef Menapace in August 1942 on the Russian Front, this aircraft still carries the standard factory camouflage finish of RLM 70/71 on the uppersurfaces with RLM 65 underneath. It also had the outer underside of the upper wing Eastern Theatre fuselage band painted in yellow. The chevron was in black with a white outline with the vertical bar in red also outlined in white. The other emblems shown are the Infanteriesturmabzeichen (Infantry Assault Badge) and the Mickey Mouse badge of II./Sch.G 1 which were stencilled on the forward fuselage.

casualties were comparatively low, this resulted in aircraft damage disproportionate to success. This is also illustrated by the experiences of JG 54 which had been obliged to carry out *Jabo* attacks during the winter of 1941/1942 as adequate bomber forces which could have been committed against ground targets were not available. Bombs carried included 500 kg, 250 kg and 50 kg types, plus the SD 2 type but, of seven total losses sustained over enemy territory during the winter months, six were due to ground fire and another 36 aircraft received hits in their radiators. As the engines of these aircraft quickly seized, only a few could be flown back to their airfield and landed safely.

Assigned to VIII. *Fliegerkorps* to support the 11. *Armee* in the retaking of the Kerch peninsula, the Bf 109s and Hs 123s of I./Sch.G 1 arrived at Gramatikovo in the Crimea in early May 1942. The VIII. *Fliegerkorp's* attacks against Soviet positions and against troop and supply columns immediately behind the front were so successful that the German infantry were able to break through the forward lines on the first day of the attack. Kerch fell on the 15th, losses by I./Sch.G 1 being only two Bf 109 E-7s on the 11th, probably shot down by anti-aircraft fire.

With the Crimea in German hands, the *Gruppe* was ordered north to Konstantinovka to stem a Soviet counter-offensive launched from the Izyum salient towards Kharkov and was heavily engaged against Soviet armour, troop concentrations and supply columns until 28 May when the salient was eliminated. The *Gruppe* then moved to Kharkov-Rogan to support Sixth Army in its drive to the River Don and then to Stalingrad.

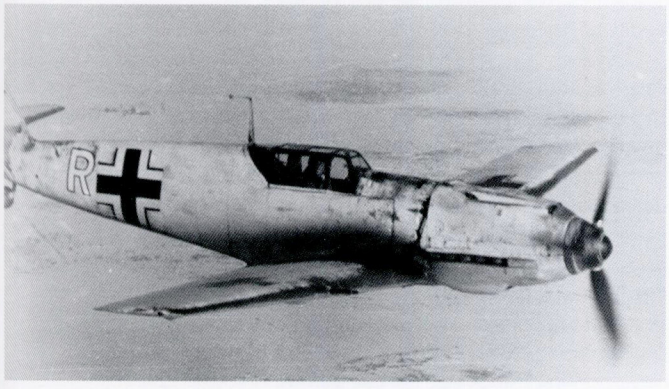
As mentioned in the text, the composition of Schlachtgeschwader 1 was unusual in that the Hs 123-equipped 7. Staffel formed part of I. Gruppe. Here, 'Yellow E' of 7./Sch.G 1 stands on a airfield in Russia in 1942. The light dusting of snow suggests late autumn, at which time the Gruppe was supporting the German drive towards Stalingrad.

Stalingrad

Operations in the Stalingrad area during the autumn resulted in a number of aircraft being damaged by anti-aircraft fire, but again with few total losses, although the *Staffelkapitän* of 3./Sch.G 1, *Oblt.* Heinz Frank, was injured in a crash at Tusov on 15 October. This, however, did not prevent Frank from flying his 700th operational mission the following month.

A snow camouflaged Bf 109 E-7 of I./Sch.G 1 in the winter of 1941/42. Note that the Schlacht triangle has been completely overpainted and that when the individual aircraft letter R was applied, it was positioned in relation to the horizon rather than the aircraft's centre line.

The Soviet counter-attack at Stalingrad opened on 19 November with a drive from the north and was followed on the 20th by a thrust westwards which was to meet the northern attack and encircle the Germans. The two forces met on 23 November, trapping and sealing the fate of Sixth Army and part of Fourth Panzer Army. Between 30 November and 19 December, during which period the *Gruppe* withdrew to Millerovo, four Bf 109 E-7s were lost and on 31 December, the new *Staffelkapitän* of 3./Sch.G 1, *Oblt.* Josef Graf von und zu Hönsbröck, was killed by ground fire.



Meanwhile, in September 1942, the foundations of *Schlachtgeschwader* 2 were laid with the formation of I./Sch. G 2 at Comiso in North Africa. A *Geschwader Stab* under *Major* Wolfgank Schenk and the II. *Gruppe* under *Hptm.* Werner Dornbrack were later formed at Gleiwitz in December.

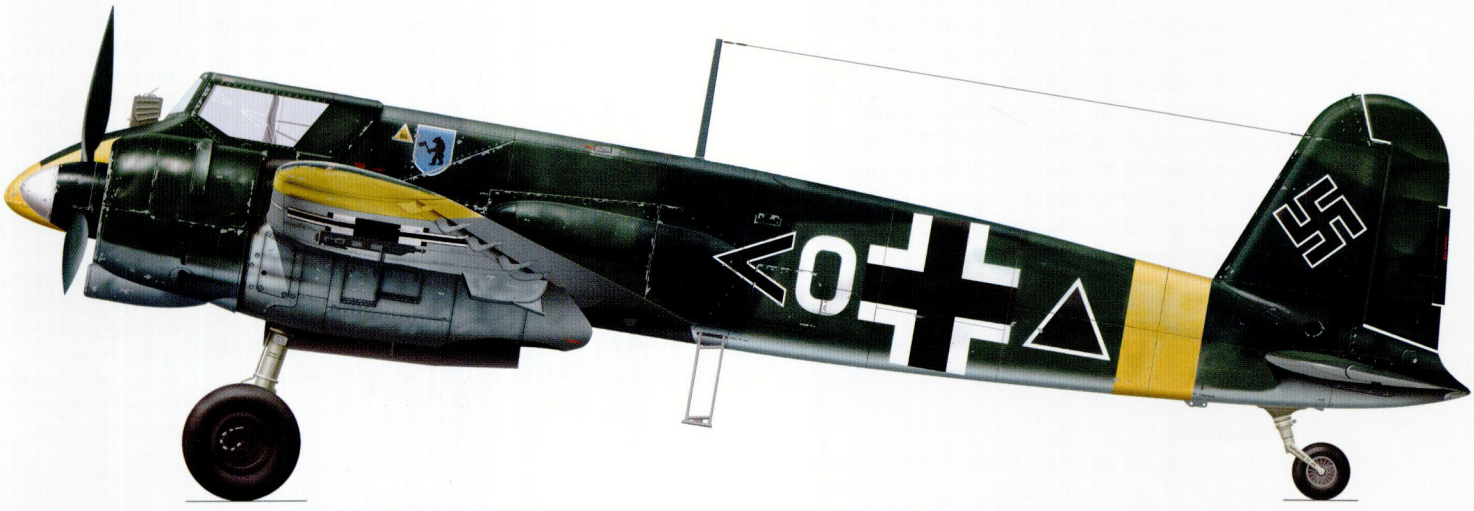
Throughout January, and despite appalling flying conditions, the critical situation on the whole Southern Sector called for operations to be continued from Shachty, north-east of Rostov, and from Voroshilovgrad. As the Soviet Army continued its advance through the Donets basin, support missions were flown from Gorlovka in February. On the 16th, Kharkov was lost to the Soviets but recaptured two weeks later. The recapture of the city was supported by I./Sch.G 1, which moved to Kharkov-North on 14 March. There was then a temporary lull in the fighting, during which I./Sch.G 1 began converting to the Fw 190 A-5 and F-3.

An Hs 129 B-2 of 4.(Pz)/Sch.G 1 in the winter of 1942/43. This particular machine, W.Nr. 0366, is known to have been damaged in an emergency landing in the Crimea in May 1943, although the hole near the base of the rudder shown here indicates that it had also received earlier combat damage.

The Fw 190, which had already proved outstandingly successful in the fighter role, was ideally suited to ground-attack missions. Compared with the Bf 109 E-7, it was more heavily armed with 13 mm machine guns and 20 mm cannon, could carry a heavier load of bombs, had a wide-track undercarriage suitable for operations from rough forward airstrips, and was powered by an air-cooled radial engine which was far less susceptible to small arms fire than that of the Bf 109.

With conversion completed at the end of April, the *Gruppe* moved to Barvenkovo and Varvarovka, just to the rear of the front lines south-west of Izyum. Despite heavy fighting over the following six weeks, only two Fw 190s were lost.

Meanwhile II./Sch.G 1 had also joined operations in Southern Russia under *Luftflotte* 4. This *Gruppe's* first combat loss occurred on 9 May when the Hs 129 B-1 flown by *Hptm.* Max Eck was shot down by anti-aircraft fire near Kerch in the Crimea and the pilot listed as missing. After moving to



Hs 129 B-1, 'White O', 5./Sch.G 1, Eastern Front, Summer 1942
This aircraft carried a large black triangle – the marking of the Schlachtflieger units, outlined in white behind the fuselage cross and yellow theatre markings in the nose, lower wing tips, and rear fuselage – the spinner tips were white. The Berlin bear Staffel badge was applied behind the cockpit and the camouflage was the standard RLM splinter pattern 70/71/65. This aircraft was fitted with an MK 101 cannon.

Konstantinovo in mid-May, the *Gruppe* operated in the Izyum area and around Stalino, but Soviet anti-aircraft fire resulted in the loss of another five Hs 129s plus one seriously damaged before the end of the month. After the main effort shifted to the Kursk area and eastwards towards Voronezh at the end of June, the *Gruppe* split up, the 6. *Staffel* operating from Volchansk, north-east of Kharkov, and 5. and 7. *Staffel* from Shatalovka, Orel and Kursk in the central sector.

Up until June 1942, only three Hs 129s equipped with 30 mm MK 101 cannon were operational, these being employed at Kerch and Kharkov. All other Hs 129s had flown with bombs and, although the aircraft possessed a powerful fuselage armament of two 15 mm and two 20 mm cannon, this was insufficient to destroy Soviet armour, and the bombs were of little use against tanks except in particularly fortunate circumstances. The MK 101 cannon, however, fired special tungsten cored armour-piercing rounds which could penetrate the armour of Soviet tanks, and it was the appearance of these machines which caused the Soviets such great consternation.

A further batch of MK 101 cannon was delivered from the Rechlin test centre straight to 4./Sch.G 1 at Kharkov-Rogan in June, and the *Staffel* went into action with them immediately. This was the period of the Soviet's renewed attack against Kharkov, and the cannon-armed Hs 129s played a significant part in halting and turning back this offensive. Excellent results were also achieved during the Soviet retreat from Kharkov to Voronezh when attacks were made by waves of up to 21 aircraft; captured Soviet soldiers stated that the Hs 129s had not only put many tanks out of action, but had also caused panic among the troops.

On the debit side, however, another eight Hs 129 B-1 and B-2 aircraft had been totally destroyed in the period from the end of June to 15 July due to mechanical failure or anti-aircraft fire. One of the machines shot down was flown by *Lt.* Hans-Hermann Steinkamp, later to become one of only four Hs 129 pilots to be decorated with the *Ritterkreuz*. Steinkamp had taken off from Frolov-West on a mission against retreating Soviet troops on 28 June when his left engine was hit by infantry fire and caught fire. His aircraft crash-landed near the River Tim, and Steinkamp was fortunate in being able to evade capture and return to his unit. This incident illustrates an important feature of the Hs 129, for when aircraft were damaged or crashed as a result of the *Gruppe's* dangerous missions, the armour-plated cockpit and robust construction invariably guaranteed the pilot's survival, even when the aircraft was a total loss.

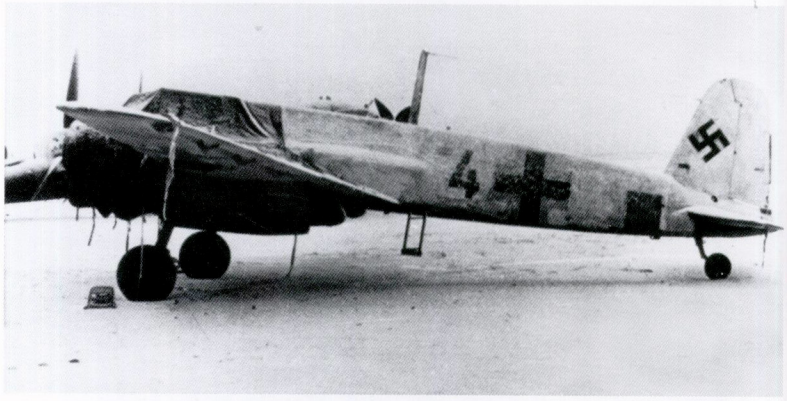
From mid-July the *Gruppe* flew in support of the advance on Stalingrad, during which losses were very light, only four Hs 129s being totally destroyed as a result of enemy action in the three months from 1 September to the end of November. By this time, 5./Sch.G 1 had been withdrawn to Jesau in East Prussia in October to rest and refit for operations in Tunisia. Before the *Staffel* went into action, however, it was re-designated 8./Sch.G 2 and a new 5./Sch.G 1 was created in Germany, equipped with Fw 190s, to heal the gap in Sch.G 1's establishment.

This Ju 87 D-5, banking to attack its target, shows again the trail of exhaust deposit which often marked the whole length of the fuselage of operational machines. Note the characteristic extended wing tips of the D-5, tipped in yellow, and the Stammkennzeichen under the wings. Note the Dinortstäbe extenders fitted to the bombs on the outboard wing pylons.

Junkers Ju 87 D-5 coded 6G+IM

This Ju 87 also carries the standard factory applied splinter pattern of the two greens RLM 70/71 with RLM 65 underneath. Both the Balkenkreuz and Hakenkreuz have been applied painted in white outline only. In common with nearly all the aircraft operating on the Eastern Front this aircraft carries a yellow fuselage band and also yellow underneath the outer wing tips. The unit code 6G is painted in black, one-sixth the height of the standard lettering 'IM' shown after the Balkenkreuz, with the 'I' in white. The spinner tip is red with a small segment of white painted behind. Unusual is that the original factory code S+H – V+? is still painted in black on the underside of the wings.

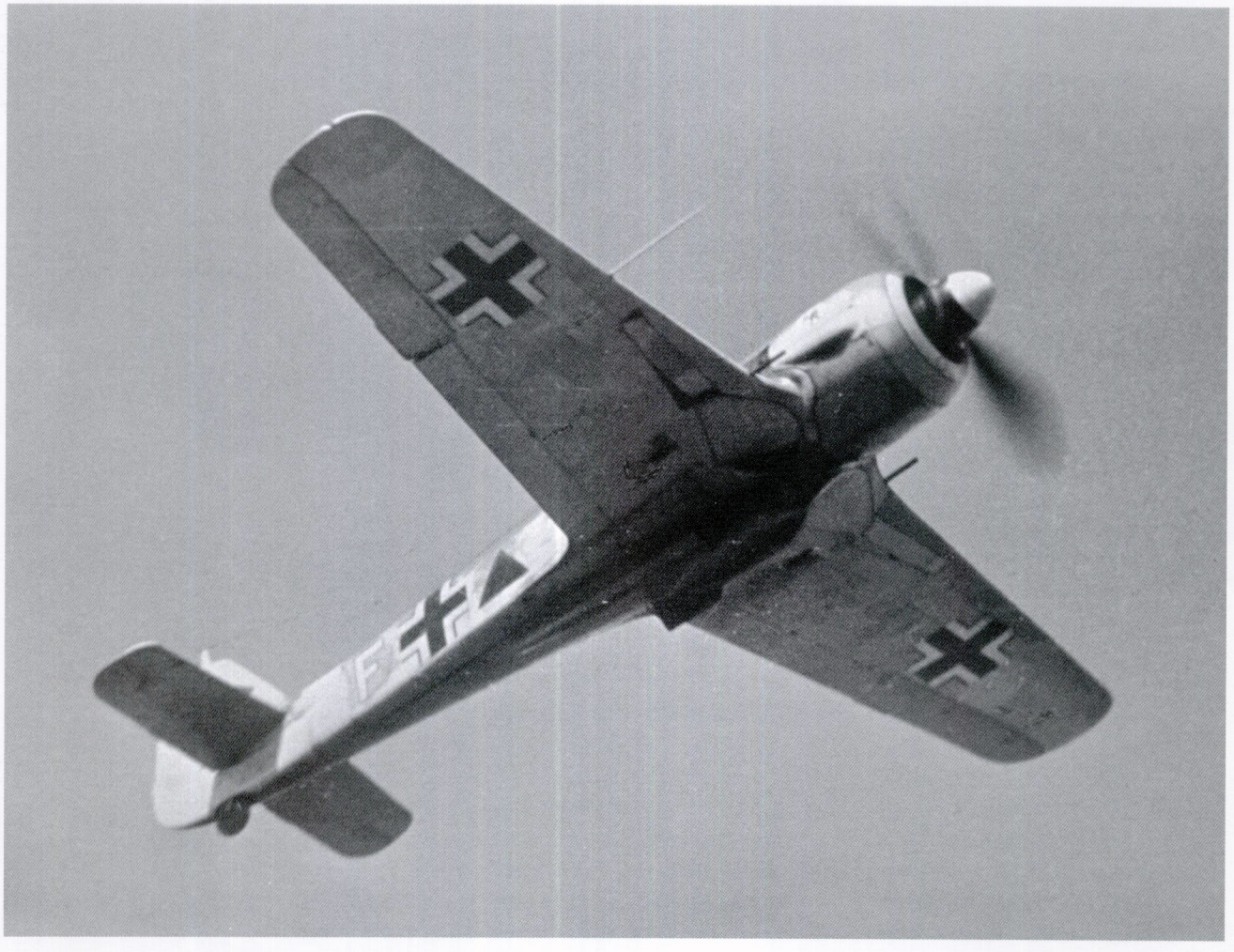
Meanwhile, in accordance with an instruction from Göring in mid-May calling for the creation of an anti-tank Staffel for the *fighter* units, cannon-equipped Hs 129s had been issued to JG 51 'Mölders', forming a special anti-tank *Staffel*, the 13.(*Panzer*)/JG 51 under the command of *Oblt*. Eggers. This first went into action at Rzhev on the Moscow Front, where it flew 73 anti-tank sorties between 14 August and 26 September. Three aircraft were lost and one damaged, but 29 tanks were claimed destroyed. In December, this *Staffel* joined II./Sch.G 1 on the Stalingrad Front but was unable to stop the Soviet advance and both units fell back to Voroshilovgrad. Nevertheless, in a two-week period in January, when enemy action and the weather reduced average daily availability to just two serviceable aircraft, the Hs 129s of the two units claimed 13 tanks destroyed.



Soon after the service introduction of the Hs 129, enthusiastic reports from the front prompted Göring to suggest that every fighter Geschwader on the Eastern Front should have one Staffel equipped with the type for rapid deployment against Soviet armoured breakthroughs. However, the idea was limited to the 13. Staffel of Jagdgeschwader JG 51 'Mölders', one of this Staffel's machines being shown here in the winter of 1942/1943.

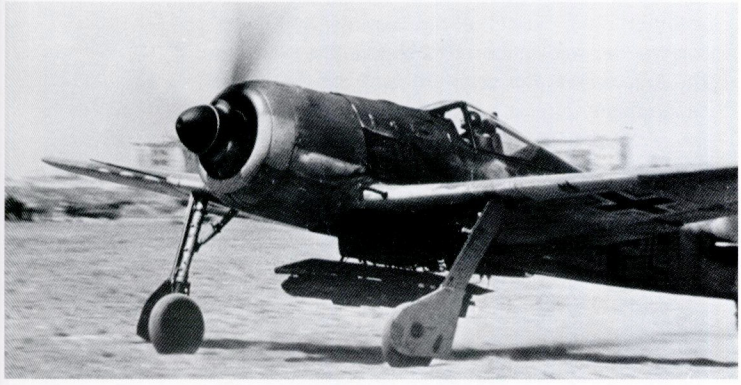
In early January 1943, most of II. Sch.G 1, apart from 7. *Staffel* which continued to fly the Hs 123, converted to the Fw 190. A few Hs 129s also remained in Southern Russia, and the *Kommandeur*, *Hptm.* Frank Neubert, was shot down and wounded on 30 January when his Hs 129 was hit by anti-aircraft fire near Skurbiy. The *Gruppe* then moved to Pavlograd and then Anapa in the north Caucasus, where it flew in support of 17. *Armee*, cut off in the Kuban bridgehead. Aerial activity in this sector was intense, with the *Schlachtflieger* often flying up to 12 missions a day in response to request for air support from the ground forces. However, as the Soviet Air Force outnumbered the *Luftwaffe* by four to one and had moved up heavy anti-aircraft defences, losses in the bitter fighting were very heavy. Between 10 and 27 May, at least seven Fw 190 A-5s were shot down by anti-aircraft fire while attacking targets near Abinskaya and Krymskaya, while others were destroyed or damaged in Soviet bombing attacks. In addition, 8.(Pz)/Sch.G 1 lost 11 Hs 129s, one of these being flown by *Hptm.* Rudolf-Heinz Ruffer, the *Staffelkapitän* of 8.(Pz)/Sch.G 1. He was attacking boats in the swampy lagoons on the coast of the Sea of Azov on 3 May when his port engine was completely shot away. Ruffer, who was later decorated with the *Ritterkreuz*, crash-landed his Hs 129 and spent an uncomfortable day and night in the mud and reeds before being rescued.

Underside view of White F, an Fw 190 of Sch.G 1 shortly after becoming airborne. The black equilateral triangle on the side of the fuselage was unique to the Schlachtflieger and continued in use until April 1943.



Luftwaffe ground personnel arming and refuelling a ground-attack Fw 190. Note the 'Ironing Board', the Luftwaffe's name for the ER 4 rack mounted under the fuselage.

Above: An Fw 190 A-5 of Stab I./Sch.G 1 being rearmed in the summer of 1943. The machine was camouflaged in the standard splinter and mottled scheme of 74/75/76 and carried a plain black triangle ahead of the fuselage cross. The tactical letter C behind the cross was green.



Above: A taxiing Fw 190 equipped with an ER 4 rack which allowed four bombs each of 50 kg to be carried. The weapons seen here appear to be SC 50s.

An Fw 190 A-5 clearly showing the yellow fuselage band and yellow undersides to the engine cowling and wing tips. This particular machine, marked with a chevron and horizontal bar in black outlined in white, belonged to II./Sch.G 1 and is believed to have been flown by a Staffelkapitän.

Operation 'Zitadelle'

In the spring of 1943, the Germans began planning for an offensive to pinch off a large Soviet salient in the front lines between Kharkov and Orel. Army and *Waffen-SS* forces were concentrated on both flanks of the salient while *Luftflotte* 6 and VIII. *Fliegerkorps* built up a total of 1,830 operational aircraft, all tasked with the support of the offensive. The day ground-attack forces assembled for the offensive amounted to some 150 Fw 190s and Hs 129s distributed as follows:

Schlachtgeschwader 1 *Major* Alfred Druschel

I./Sch.G 1	*Hptm.* Georg Dörffel,	1.2. and 3./Sch.G 1	Fw 190 A-5/F-3
II./Sch.G 1	*Hptm.* Frank Neubert	5. and 6./Sch.G 1	Fw 190 A-5/F-3
7./Sch.G 1	?		Hs 123

Führer der Panzerjäger *Hptm* Bruno Meyer:

4.(Pz)/Sch.G 1	*Oblt.* Georg Dornemann	Hs 129
8.(Pz)/Sch.G 1	*Hptm* Rudolf-Heinz Ruffer	Hs 129
4.(Pz)/Sch.G 2	*Major* Matuschek	Hs 129
Pz.Jä.St./JG 51	*Oblt.* Hans Jentsch	Hs 129

Note: In addition to these forces, 8.(Pz)/Sch.G 2, which was still in the Mediterranean theatre at the start of the offensive, only became available after transferring to the Eastern Front in August. It arrived without its *Staffelkapitän*, *Oblt.* Franz Oswald, who was in hospital recovering from burns sustained in an accident with a flare pistol. The *Staffel* was held in reserve and did not go into action until early August.

The earlier Schlachtflieger triangle has been replaced by a Gruppe bar on these two Fw 190s of 5./Sch.G 1, photographed in the summer of 1943. In the reorganisation of the ground-attack forces in October 1943, this Staffel was incorporated into the 'Immelmann' Geschwader, SG 2, as its 4. Staffel.

Code-named Operation *'Zitadelle'*, the Kursk offensive was launched in sultry, thundery weather on 5 July, but the Soviets had been forewarned and planned to absorb the German thrust in a series of deep anti-tank defences and then counter-attack. Although best known as the largest tank battle in history, the Kursk offensive was also the scene of major air battles, and in the first few days the *Luftwaffe* alone mounted over 3,200 sorties daily. The ground-attack Fw 190s and Hs 123s were in action from the start, flying 335 sorties on the 5th, although until the 9th this dropped thereafter to an average of some 200 sorties per day.

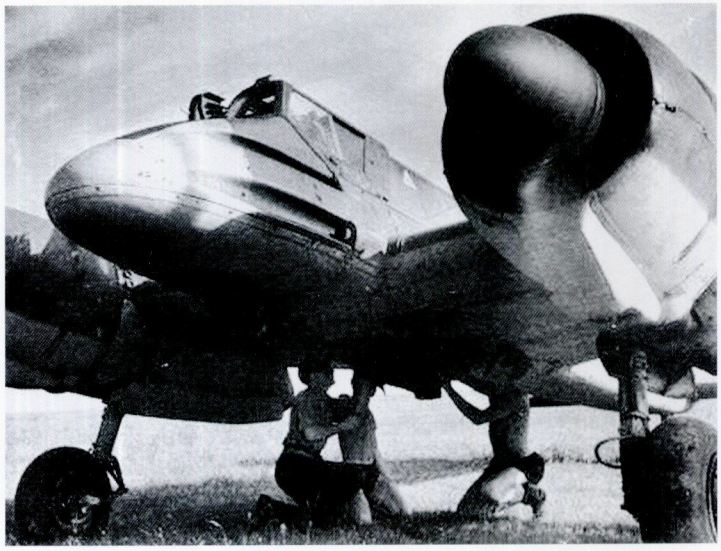
On 7 July, the Hs 129s achieved a major victory when, in a two-hour battle fought in co-operation with the Army's flak, they succeeded in beating off an attack by T-34 and KV-1 tanks against a *Waffen-SS* division east of Belgorod. However, the high point of the battle came on the 8th, when, while patrolling over the battle lines, *Hptm.* Bruno Meyer observed a Soviet infantry brigade supported by a strong tank force emerging from a wood. Meyer immediately radioed for his other *Staffeln* to scramble in relays, and also alerted *Hptm.* Dörffel's I./Sch.G 1. The Fw 190s went into action first, successive flights releasing containers of SD 2 anti-personnel bombs over the masses of infantry who, incredibly, took no cover. Many were killed, but the survivors only stopped their advance and began to flee after the Fw 190s began to fire their cannon and machine guns directly into the ranks of soldiers.

When the low-flying Hs 129s attacked the armour, not a single tank was spared and, belching fire and smoke, they were knocked out one after another. After three hours of dreadful work, the last of the Hs 129s and Fw 190s flew away, leaving behind a battlefield littered with the bodies of dead soldiers and the gutted remains of knocked-out tanks. Even as dusk fell, the darkening sky was lit by the occasional flash of detonations as fuel or ammunition in the still smouldering tanks exploded.

By 10 July, despite the huge forces mustered for the attack, the Germans had penetrated only about 16 km in the north at great loss before being stopped, and 42 km in the south. The climax of the battle in the south came on 12 July when 700 German tanks engaged 850 Soviet tanks, but further German progress was impossible, and on the 15th the Soviets counter-attacked. Two days later, Hitler terminated the battle and German units in the area were left to extricate themselves as best they could. On 31 July, Army Group Centre began to withdraw from the Orel area. This resulted in an upsurge in the aerial fighting as the Soviets attempted to overrun the German forces.

The heaviest *Schlachtflieger* losses were incurred by the Hs 129 *Staffeln*. Experience in Tunisia in early 1943 had shown that the aircraft was vulnerable to established anti-aircraft defences and enemy fighters, and in Russia the machines were therefore to be operated only to seal off armoured breakthroughs where enemy opposition was not yet properly organised. However, when the Germans were forced to retreat from the Kursk area, the Hs 129s were ordered into the air regardless of enemy opposition. During the early phase of *'Zitadelle'*, the Hs 129 *Panzerjäger Staffeln* had destroyed or seriously damaged many Soviet armoured

Georg Dörffel, the Kommandeur of I./Sch.G 1, flew his 1,000th mission from Kiev-South on 6 October 1943, on which date he also claimed his 30th aerial victory. This photograph shows his Fw 190, which had been specially marked with the number 1,000 on the engine cowling. The bomb beneath the fuselage had also been similarly decorated.



Luftwaffe weapons personnel making last-minute adjustments to the 30 mm MK 103 cannon under the fuselage of an Hs 129. This weapon became available in July 1943 and proved extremely effective against Soviet armour.

and soft-skinned vehicles with, generally, few losses, but this balance later changed during the German retreat when they were ordered out on near-suicidal missions for which the aircraft had not been designed, nor the aircrews trained. By 23 August, therefore, when the Soviets had recaptured Kharkov, so marking the end of the *'Zitadelle'* battles, 48 Hs 129s had been destroyed or so seriously damaged they were considered total losses. In addition, 17 pilots were reported killed or missing, one of the dead being *Major* Matuschek, the *Staffelkapitän* of 4.(Pz)/Sch.G 2, whose aircraft was shot down by ground fire. The heaviest losses, however, were incurred by Pz.Ja.St./JG 51. Before the opening of *'Zitadelle'*, this *Staffel* had 15 Hs 129s on strength on 30 June, but between 5 July and 23 August it lost at least 12 machines to Soviet anti-aircraft fire and fighters.

The Soviets exploited their victory at Kursk to the full and maintained the initiative from August to December by launching a series of blows along the whole of the central and southern fronts. The German troops fought with determination and great skill but were compelled to withdraw. In the air, increased Soviet opposition obliged the *Luftwaffe* to switch its insufficient forces from one pressure point on the extended front to another in response to each Soviet offensive.

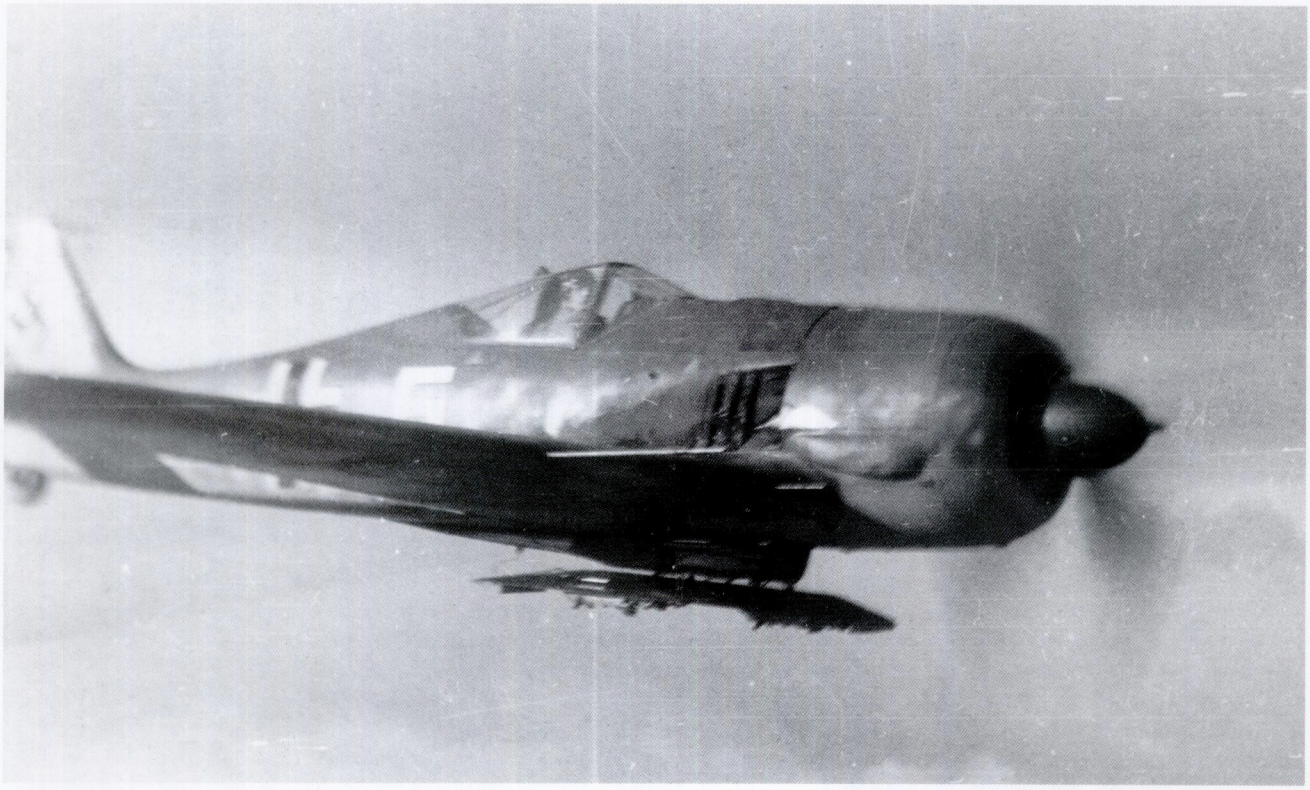
The Reorganisation of the *Schlachtflieger*

In September 1943, German Army Groups South and Centre began a strategic withdrawal to a new defensive line behind the River Dnieper and southwards to Melitopol and the Sea of Azov. At the same time, the first moves were made to reorganise and modernise the *Luftwaffe's* ground-attack arm. This began in early September with the appointment of *ObstIt. Dr.* Ernst Kupfer, previously the *Kommodore* of St.G 2, to the newly-created post of *General der Nahkampfflieger*. As the title suggests, Kupfer was given command of all *Luftwaffe* units which fought in close co-operation with the Army. These included the *Schlachtgeschwader* (Sch.G), the *Jagdbombers* (*Jabos*), a *Schnellkampfgeschwader* (SKG), a *Gruppe* of *Lehrgeschwader* 2 (LG) and the largely nocturnal *Störkampfverbände*. In addition, some *Zerstörer* formations (ZG) originally equipped with the Bf 110 had partially converted to the Bf 109 and Fw 190 and had been assigned ground-attack tasks. Finally, there were the *Stukageschwader* (St.G).

Oberst Dr. Ernst Kupfer, shown here when Kommodore of St.G 2 'Immelmann', became General der Nahkampflieger in September 1943. Shortly after his appointment, he presented an address at the RLM and spoke of the Ju 87 in the following terms: "When people talk about the Stukas, they still think of a Ju 87 plunging towards the ground more or less vertically, dropping bombs and making a terrific noise in the process. But that's a cliché, and the Stukas have had to pay dearly for this cliché." Following this address, plans were put in hand to replace the Ju 87 with the Fw190.

The Ju 87 formations were neither bomber nor ground-attack units, but formed an independent arm in the *Luftwaffe* as dive-bombers. Their task was not the close support of the Army, but to attack strategic targets within their range, especially small, static enemy positions of vital military importance. Moreover, the manoeuvrability of the Ju 87 and its armament made it suitable for attacks on such targets as railway lines, tanks and mechanised supply columns, warships and merchant ships of all kinds, troop concentrations and columns on the march.

The campaign in the West in 1940, however, had caused a considerable change in the duties of the Ju 87, and in the meantime, close support of the Army had become as important as attacks on the various other targets listed above. Consequently, during the course of the war, the main task of the dive-bombers had evolved into that of close support of the Army. The Ju 87s' methods of attack, too, were the same as that employed by the ground-attack aircraft. If ground defences were light, they made strafing passes after dropping their bombs, or, if the defences were heavy, they flew to the target at high altitude, dived down, and climbed back to a safe height before attacking again. As these *Stuka* tactics were the same as those employed by the *Schlacht*, ZG and SKG formations etc, then the Ju 87 units, too, had therefore to be regarded as ground-attack units.



One of the new Schlachtgeschwader formed in October 1943 was SG 10 with a Geschwader Stab formed from Stab/SKG 10 under Major Heinz Schumann. The I. Gruppe was formed from 1., 2. and 3 Sch./G 2; II. Gruppe from IV./SKG 10; and III./SG 10 from the Gruppenstab, 4, 5. and 6./St.G 77. Here an Fw 190 of SG 10 is returning to its base after a sortie. Although the ER 4 carrier attached to the standard ETC 501 under the fuselage is empty, it would have carried four SC 50 bombs.

Another matter which needed addressing was that the existing ground-attack formations came under the control of the *General der Jagdflieger*, while the Ju 87 dive-bomber units were under the *General der Kampfflieger*. The ground-attack arm, which had proved to be increasingly important during the course of the war, thus had two heads, although the disadvantages of such an arrangement were not, however, obvious until 1942. Up until that time, no particular tactical or technical difficulties had arisen, partly because the *Luftwaffe* enjoyed air superiority on all Fronts.

Undoubtedly, a separate *Waffengeneral* would have looked after the interests of the ground-attack arm quite differently and with more vigour than the two *Waffengeneral* who still had to contend with the fighter arm on one hand and the bomber arm on the other. During the course of the war, these officers were so much concerned with the development of their own special arm, that the interests of ground-attack could only be considered to a very small extent.

The development of the war, however, demanded another solution. In view of the difficulties under which the ground-attack formations had to fight, in all theatres of war – the ever-increasing enemy defences, the specialisation of day and night operations and the special tactics required to combat tanks – new technical developments and the replacement of obsolete aircraft became essential. Direction by a separate *Waffengeneral* therefore became even more necessary and on 7 September 1943 the post of *General der Nahkampfflieger* was created, although this was changed to *General der Schlachtflieger* on 7 October. This embraced all *Stuka*, *Schlacht* and *Panzerjäger* formations which operated by day, as well as the night ground-attack units and most of SKG 10. The exceptions were the Bf 110 formations, which remained as heavy fighters under the *General der Jagdflieger*, and I./SKG 10, which remained subordinate to the *General der Kampfflieger*.

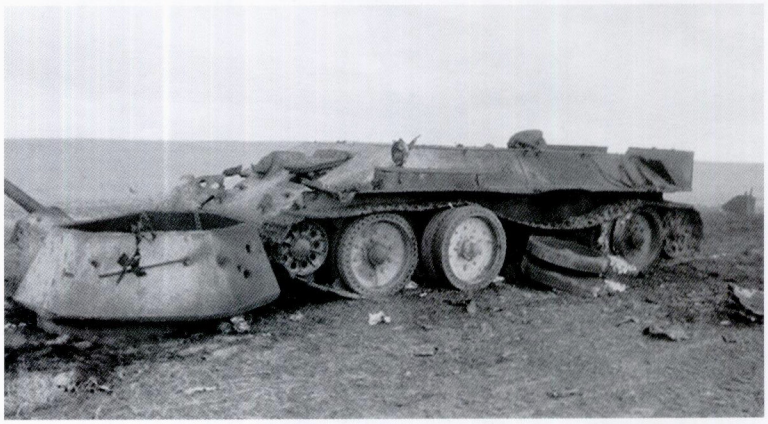
Concurrent with the appointment of Kupfer as *General der Schlachtflieger*, it was planned that all day ground-attack units would convert to the Fw 190 by the summer of 1944 and that the Ju 87s so released would be passed to the newly-established *Nachtschlachtgruppen*, which had replaced the *Störkampfstaffeln*. As we shall see, however, this aspect of the reform did not proceed as well as hoped. Nor did Kupfer live to see the full effect of his planned reforms, for on 6 November 1943, the He 111 in which he was a passenger crashed into a mountainside in Greece. He was eventually replaced on 1 January 1944 by *Oberst* Hubertus Hitschhold.

Meanwhile, the ground-attack formations had been reorganised and re-designated. The majority of the earlier, confusing designations were dispensed with and, although Göring wished to retain the word '*Stuka*' for the sake of tradition, all ground-attack formations had been re-designated *Schlachtgeschwader*. The concentration of all such units resulted in the following formations:

Six *Schlachtgeschwader* with a total of 17 *Gruppen*	SG 1, SG 2, SG 3, SG 4, SG 10 and SG 77
One independent *Gruppe*	I./SG 5
One Anti-tank *Gruppe*	IV./SG 9
Four Anti-tank *Staffeln*	10.(Pz)/SG 1, 10.(Pz)/SG 2, 10.(Pz)/SG 3 and 10.(Pz)/SG 77

The Development of the Panzerjäger

The requirement for special *Luftwaffe* anti-tank units arose because, whenever Soviet armour broke through the front line, the Army, despite having a variety of effective anti-tank weapons, was frequently unable to commit enough of its own weapons. In the spring thaw period in Russia, and in the autumn, the ground was so muddy and roads so poor that it proved impossible to bring up the necessary anti-tank armament. The only possibility of combating armoured breakthroughs was, therefore, by employing aircraft.



Destroying armour from the air with bombs was difficult and the results often ineffective as only a direct hit, or a very near miss caused any real damage. Some pilots were able to correctly judge the speed of a tank and release a delayed action bomb so that it exploded as the tank passed over it, but such a tactic called for extreme skill and was mastered only by a very few experts. Great importance was therefore attached to the use of other weapons, the most important of which were containers of hollow charge bombs and armour-piercing cannon. Shown here is a destroyed T-34 medium tank, the mainstay of Soviet armoured forces throughout the Second World War.

It was apparent, however, that the ordinary ground-attack units were unable to destroy enough tanks with their cannon and bombs, but the special anti-tank units with armour-piercing cannon were very successful. These aircraft were used against tanks which had broken through the battlefield and sometimes well into rear areas, and were particularly effective if normal ground-attack aircraft attacked the more thinly armoured vehicles and other transports which followed the tanks.

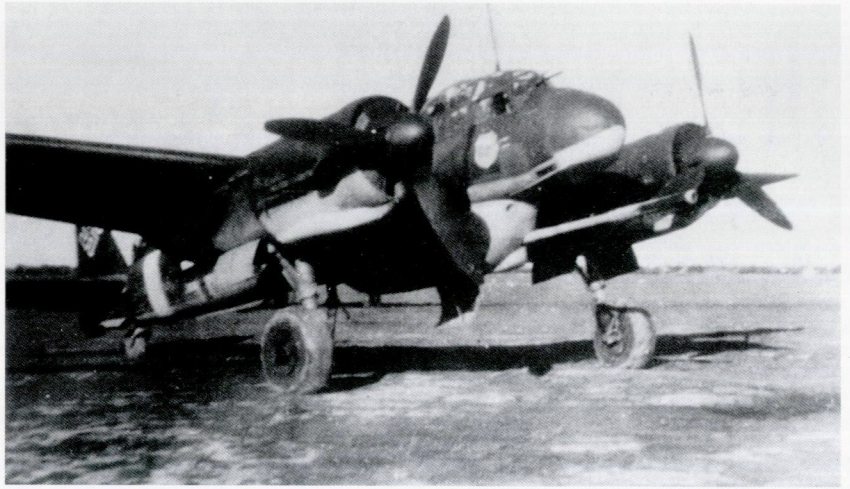
Under *Oberst* Hitschhold, the development of the *Schlachtflieger* proceeded along up-to-date lines with priority being given to the conversion of the Ju 87 units to the Fw 190 and to anti-tank warfare, the latter having become an increasingly important aspect of the ground-attack arm. As the earliest days of the Russian campaign had indicated, bombing attacks on tanks were very unsatisfactory, and this had resulted in the Hs 129s of 4. and 8./Sch.G 1 and 4. and 8./Sch.G 2 being equipped with the 30 mm Mk 101 cannon.

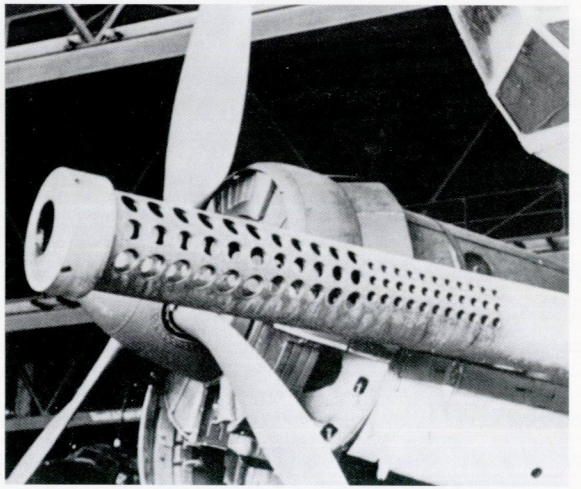
Further experimental work with anti-tank cannon had begun in December 1942 with the formation of a special anti-tank trials unit, *Versuchskommando für Panzerbekampfung*, comprising aircraft equipped with large calibre cannon. Aircraft types included Bf 110s and Hs 129s fitted either with a single 37 mm BK 3,7 or 50 mm Pak 38, and Ju 87 Ds equipped with two BK 3,7 cannon. The unit became operational in the Bryansk area of the Eastern Front in early 1943, the Ju 87s with BK 3,7 cannon yielding extremely promising results when employed against Soviet armour. These anti-tank Ju 87s were later assigned to *Stukageschwader* 1 and 2, becoming Pz.St/St.G 1 and Pz.St/St.G 2. The Bf 110s proved disappointing in the anti-tank role, but 13 of them subsequently formed the *Panzerjäger Staffel* of ZG 1 and were employed under *Luftflotte* 6 during *'Zitadelle'*. The *Versuchskommando für Panzerbekampfung* also had on hand a number of Ju 88 Ps fitted with the huge 75 mm Pak 40 L, capable of penetrating over 100 mm of armour, but these machines proved too slow and unwieldy for anti-tank work and were eventually handed over to III./KG 1. The BK 3,7 or Pak 38-equipped Hs 129s were no improvement over the existing MK 101, and further trials were abandoned.

Meanwhile, although the MK 101 performed well with the operational Hs 129 *Staffeln* of Sch./G 1 and Sch./G 2, production of the weapon was too slow. An improved cannon, the 30 mm MK 103, was produced in time to equip the operational Hs 129 units taking part in *'Zitadelle'*.

In August 1944, trials began with an Hs 129 fitted with the 75 mm Pak 40 L, the work carried out earlier to adapt the weapon to the Ju 88 proving advantageous in marrying it to the Hs 129. This combination proved

The concept of the 75 mm airborne anti-tank cannon was later taken up by the Henschel factory in Berlin and installed in a specially converted Hs 129 B-2, W.Nr. 140494, shown here. This proved more successful than the earlier Ju 88 P-1 and the type eventually went into production on a small-scale as the Hs 129 B-3.





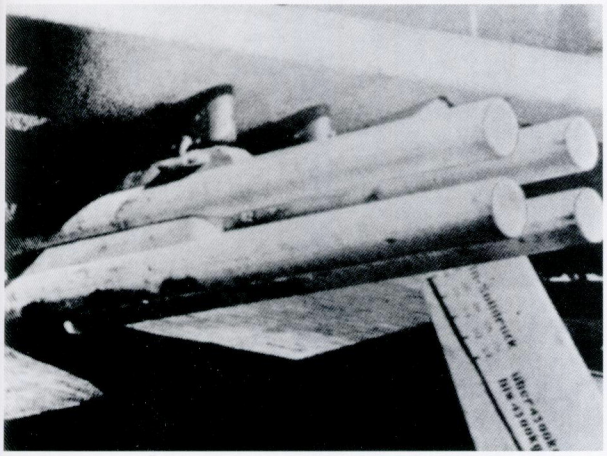
In order to provide aircraft with the firepower to destroy tanks fitted with the thickest armour, Junkers developed the Ju 88 P-1, which carried a 75 mm Pak 40 anti-tank gun and a magazine of 12 rounds. It is believed that 17 examples were completed but not all saw service as, when the gun was fired, the blast of gasses escaping sideways from the muzzle brake caused damage to the airframe. Some aircraft were sent to the 3. Staffel of the Versuchskommando für Panzerbekämpfung – the Anti-tank Operational Trials Unit – which first arrived on the Eastern Front in early 1943 equipped only with Ju 87 Gs. The Ju 88 contingent arrived in April, but the P-1 was quickly pronounced unsuitable for employment at the Front and as it does not appear in subsequent Luftwaffe operational returns, it is therefore doubtful if any were ever used in action. As far as is known, no unit code was allocated to the Kommando and the aircraft were marked only with two letters after the Balkenkreuz, examples being +GH, +KH and +OH. When the Kommando was disbanded in October 1943, although its surviving Ju 88 P-1s were originally passed on to III./KG 1, one example, less its cannon, was found serving with a training unit in Czechoslovakia in May 1945. These photographs show a Ju 88 P-1 prior to the Kommando's disbandment and the ultimate muzzle brake design which broke down the exhaust gasses into small jets. The badge featured a dagger piercing the shell of a tortoise.

Junkers Ju 88 P-1 sent for trial with 3. Staffel of the Versuchs Kommando für Panzerbekämpfung on the Eastern Front, April 1943

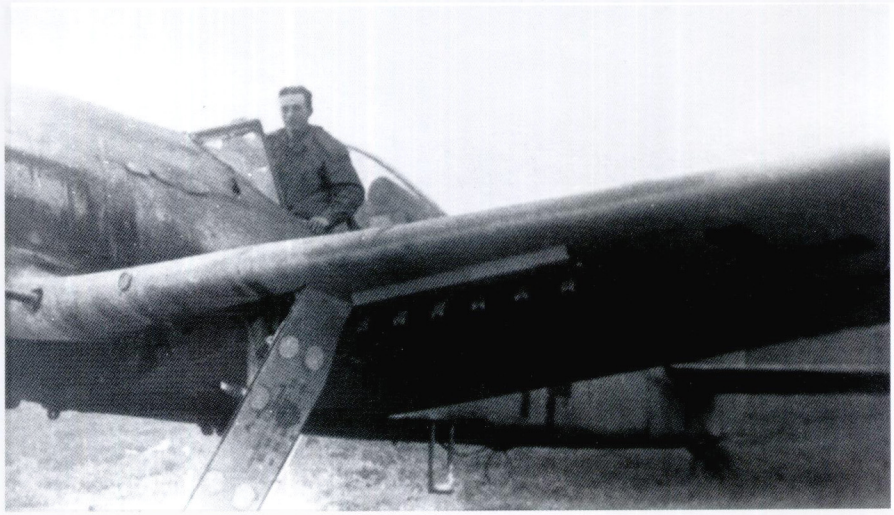
This Ju 88 was converted to the P-1 variant carrying the 75 mm Pak 40 anti-tank gun and was sent for trials on the Eastern Front. This machine coded +KH was originally a standard Ju 88 A-4 variant which had had the front cockpit glazing replaced with a new solid nose. The aircraft was camouflaged in the standard factory splinter pattern of RLM 70/71 with the undersides in RLM 65 light blue. The paintwork on the new solid nose appears to have been freshly applied after the conversion. The individual aircraft letter 'K' was painted in white on the fuselage to the right of the Balkenkreuz and the machine also carried the yellow Eastern Front Theatre band around the rear fuselage as well as yellow on the underside of the wing tips. The muzzle brake featured here shows the final design which allowed the gasses to escape safely without damaging the aircraft.

far more successful and the first Hs 129s with the 75 mm weapon were delivered to 13.(Pz)/SG 9 in October 1944. In action, the weight of the cannon and the shape of its fairing actually proved an advantage as it acted like a keel and improved the machine's stability, allowing the cannon to be used with great accuracy.

The last major development in anti-tank weapons to see service before the end of the war was with rockets, two types of which were developed, both of which produced especially successful results. The *Panzerschreck* was a hollow charge rocket which could penetrate 160 mm of armour at an angle of impact of 60 degrees. Twelve were installed under the wings of the Fw 190. The *Panzerblitz* was developed from the *Panzerschreck* and had an improved propellant which increased the speed of the rocket, imparted a flatter trajectory and allowed the pilot to fire from a greater range.



The Panzerschreck was a German Army 8.8 cm rocket projectile which was fired from launch tubes attached to the ordinary ETC bomb rack under each wing of an Fw 190. The velocity of the rockets proved too low to ensure adequate penetration and they were discarded in favour of the Panzerblitz, which was lighter and had an increased velocity.



An Fw 190 showing the rack for firing Panzerblitz 1 rockets. The Panzerblitz had a greater penetrating power than the Panzerschreck and had the additional advantage that each Fw 190 could carry twelve Panzerblitz rockets instead of eight Panzerschreck. Each Panzerblitz apparatus consisted of six rockets held in a framework of six metal rails which was familiarly called the 'Gartenzaun' (Garden Fence). The framework was secured under the wing by four bolts, two of which allowed the frame to be set at an angle of two degrees above the horizontal by the ground crew. Aiming was by means of the normal Revi sight and the rockets could be fired in salvoes of three, six, nine or the full complement of twelve. The Panzerblitz aircraft shown here was captured by US forces at the end of the war.

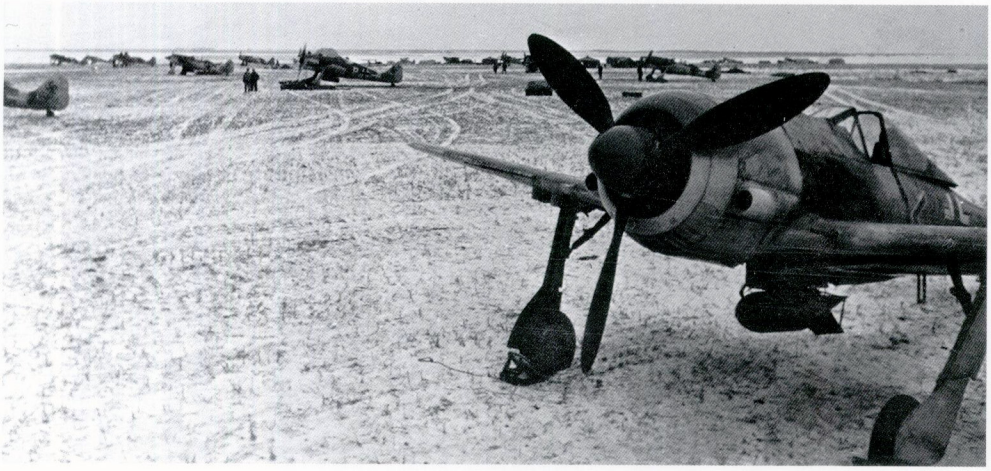
Converting to the Fw 190

The rate at which the Ju 87 units were to have converted to the Fw 190 took considerably longer than anticipated, so that although it was to have been completed in the summer of 1944, the Ju 87 was still being used on daylight missions in May 1945.

The first of the former dive-bomber *Gruppen* to convert to the Fw 190 was III./SG 1 under *Major* Friedrich Lang. On 10 March 1944, the *Gruppe* left Orsha for Vilna where the conversion was to be carried out. Lang and one of his *Staffelkapitäne* then went on to Prossnitz on the 23rd where, under the direction of *Hptm.* Karl Kennel, the *Kommandeur* of I./SG 152, the two pilots spent the next ten days familiarising themselves with the new machine. Rejoining his *Gruppe* at Vilna, Lang then imparted his knowledge to other pilots, who became instructors, while the ground personnel received their knowledge from test and other temporarily attached specialists. Practice targets were strafed and attacked with cement bombs, followed by practice missions flown in tight formation.

By the end of 1943, the Ju 87 units on the Eastern Front were suffering heavy losses, yet plans to replace the type with the Fw 190 were delayed by a demand that most Fw 190s be allocated to fighter units engaged in the Defence of the Reich, and by operational requirements which dictated that units remain at the Front. The net result was that conversion to the Fw 190 proceeded only slowly, roughly at the rate of a Gruppe every six weeks, until the end of 1944. Conversion of the remaining Ju 87 Gruppen was then again delayed by a shortage of the 100 octane C3 fuel required by the Fw 190, whereas the 87 octane B4 for the Ju 87 was more plentiful. Here, a snow camouflaged Ju 87 D is shown being refuelled. Note that some of the bombs in the foreground are grey while others are tan, and that whistles have been attached to some bomb fins. The coloured stripes on the tail section indicated that these bombs were of the SC type, and were used where a purely blast effect was required.

Plans to develop the successful Fw 190 fighter into a fighter-bomber and ground-attack aircraft resulted in a number of modification and conversion kits to allow the machine to carry bombs. When these kits were incorporated on the production lines as part of the standard build, the original Fw 190 A-4 became the F-1; the A-5 the F-2; the A-6 the F-3 and the A-8 became the F-8. In each of these photographs, the aircraft nearest the camera have been fitted with tropical dust filters.



Naturally, there was no place in the single-seat Fw 190 for the *Gruppe's* gunners, who were either transferred to other units still flying the Ju 87 or were sent for pilot training. These men were greatly missed, especially by the formation leaders, who had depended on them to watch for danger and ward off enemy fighters, help locate and identify targets and, especially, assist in the efficient reforming of the force when leaving the target area.

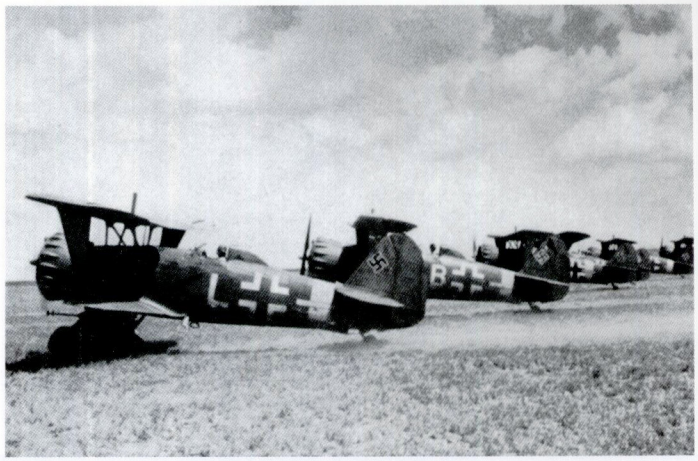
The experience of *Major* Lang and his pilots may be taken as typical of all Ju 87 units as they converted to the Fw 190 and returned to the Front. At first, without the gunners to protect their backs, the pilots invariably experienced a feeling of extreme uneasiness, but once this had been overcome, the power, speed and heavier armament of the Fw 190 gave the former Ju 87 pilots a feeling of superiority over the enemy. Initially, the prospect of being able to shoot down enemy aircraft exerted a strong influence, but thanks to the pilots' careful training and indoctrination, their main ground-attack role was not jeopardised.

The selection of weapons employed by the Fw 190-equipped *Schlachtflieger* was very important. Great emphasis was placed upon the AB 250 and AB 500 weapons containers filled with SD 1 or SD 10 bombs when attacking troops, gun and mortar emplacements, supply vehicles and facilities, while the AB 250/SD 4 HL hollow charge combination was used against enemy armour. *Staffeln* usually carried a mixed bomb load with between 20 and 30 per cent of the aircraft carrying AB containers. According to Soviet PoWs, these were more feared than ordinary bombs, and excellent results were obtained when containers were used against anti-aircraft positions, strongpoints and concentrations of troops and vehicles. Paradoxically, the attack which had the greatest effect on enemy morale was the concentrated massed attack, as practised by the Ju 87s. In this connection it is interesting to note that once the Fw 190 pilots had gained the necessary experience, targets could be attacked with the same high degree of accuracy as the Ju 87.

The Tide Turns

Very often it was the task of the *Schlachtflieger* to seek out the most important targets on the battlefield, some of which were very well camouflaged. As the *Kommandeur* of III./SG 1, *Major* Lang recalled of operations in early 1944:

"We operated from Orsha against targets in the Vitebsk area and along the highway to Smolensk, where battles were raging. Both areas stood out black against the snow-covered surrounding terrain. The flashes



This Hs 123 A-1, W.Nr. 848, originally flew with 7./Sch.G 1 until, in October 1943, II./Sch.G 1 (less its Hs 129 Staffeln) was re-designated II./SG 2. The original Gruppe's Hs 123s then served first with 6./SG 2 and from December with 4./SG 2, this latter Staffel still having three Hs 123s on strength as late as November 1944. The aircraft shown here was photographed while serving with 4./SG 2 in the late spring of 1944. Note the fuse extensions on the underwing SC 50 bombs, the horizontal bar of II. Gruppe and the black chevron ahead of the yellow aircraft letter L.

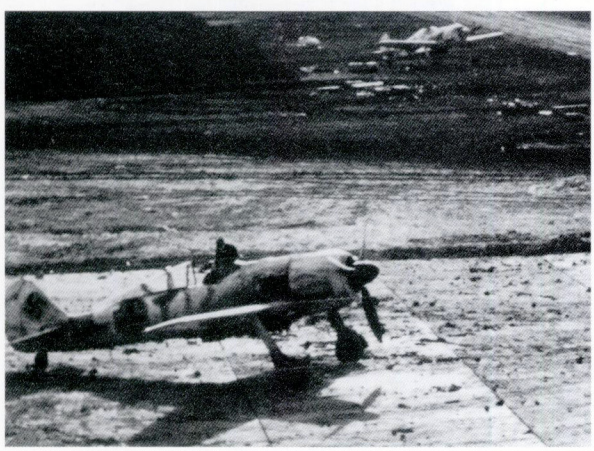
of the field guns and anti-aircraft guns could clearly be seen, even during daylight, but the targets were difficult to discern on the soil, which had been ploughed over by bombs and shells. The gun flashes were often the only, and most reliable sign of the enemy's presence. When nearing the target, you had to memorise these points, for the Russians immediately ceased firing as we approached, knowing full well that their fire would give their positions away. Only the anti-aircraft guns continued firing."

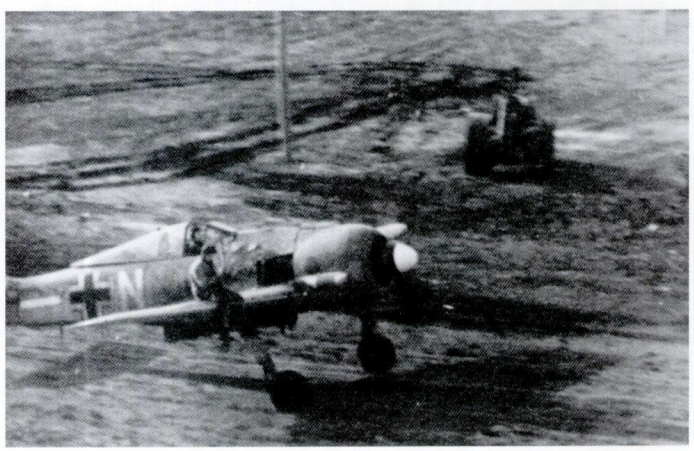
In January 1944, the Soviets launched further simultaneous offensives from Leningrad in the north to the Crimea in the south. With the *Luftwaffe* bomber force being used on transport duties, and with other units weakened and long overdue for withdrawal for rest and re-equipment, the German Air Force was therefore forced to rely on its ground-attack forces at the very time it planned to withdraw the Ju 87s and replace them with Fw 190s. Consequently, little progress had been made and, apart from II./SG 2, SG 4 and SG 10 – which had been formed from units already flying Fw 190s when they were re-designated – only III./SG 1 and a few *Geschwader Stab* flights had actually completed the conversion by the end of March 1944.

Whether flying Fw 190s or Ju 87s, however, an important feature which contributed to the effectiveness of the *Schlachtflieger* was that their training and experience enabled them to understand and interpret situations on the ground. The reconnaissance *Staffeln* previously attached to every ground-attack had been withdrawn in 1942, and because of enemy superiority and the rapid changes in the ground situation, other reconnaissance sometimes failed. In this event, the task had to be carried out by the ground-attack pilots' themselves. In such cases, a *Schwarm* flew an early morning, low-level armed reconnaissance flight over areas occupied by enemy spearheads and where ground defences were expected to be weak.

Some pilots were particularly noted for the excellence of their battlefield reconnaissance, and besides being of great importance in the planning of ground operations, their observations resulted in ad hoc missions to relieve ground formations, usually with decisive results. In the early spring of 1944, for example, when the *'Immelmann' Geschwader* was operating on the Southern Sector against a Soviet breakthrough threatening Uman, *Oblt.* Herbert Bauer, the *Staffelkapitän* of 3./SG 2, was returning from a mission when he noticed that a small force of German tanks and infantry which had begun a counter-attack that morning, appeared to be making little progress. The tanks were stationary and the infantry were lying flat on the ground for cover. The situation remained unchanged after a second mission, and even after a third. While returning from his fourth mission of the day, Bauer decided to investigate the deadlock below and discovered that the counter-attack was being held up by perfectly camouflaged Soviet anti-tank guns. Although the *Staffel's* Ju 87 D-5s had already expended their bombs, the pilots attacked immediately with their 20 mm cannon and were rewarded with the sight of exploding ammunition dumps and the gunners fleeing to a nearby wood. After a few strafing attacks, two of the anti-tank guns were put out of action and the crews of the other three killed. Only then was the German armour able to advance.

Fw 190 Fs of II./SG 2 in Southern Russia, probably in the late spring of 1944. Note that 'White N' (far right) has a tropical air cleaner and the aircraft (right) still shows traces of white winter camouflage.

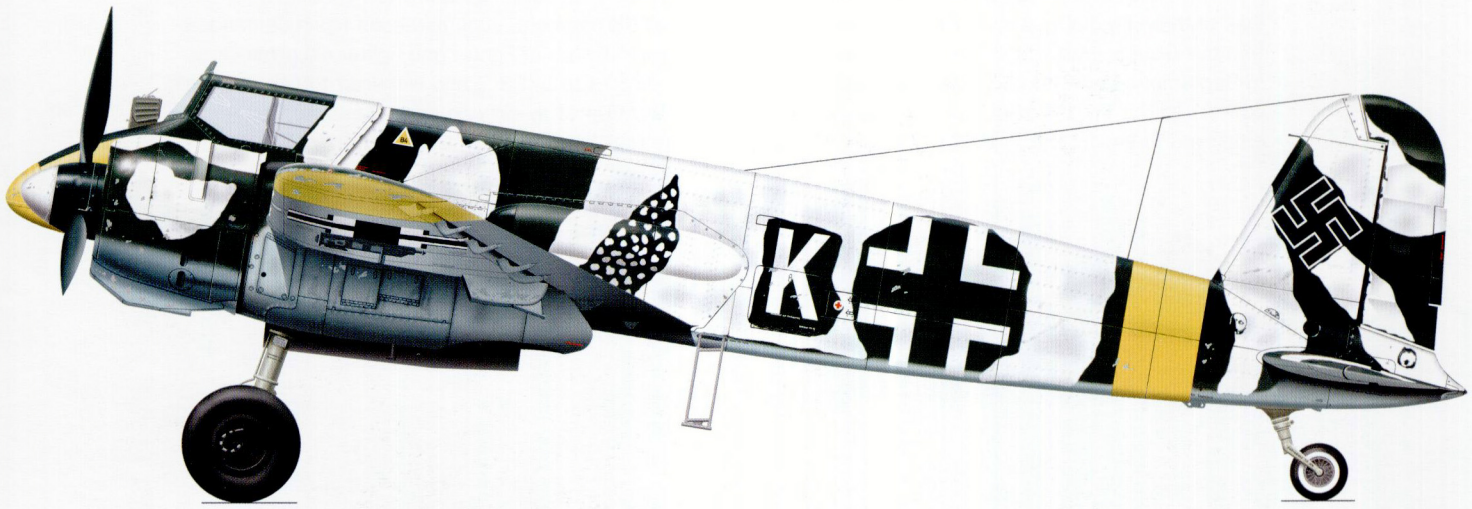




In this view of a Ju 87 G-2 armed with two 37 mm anti-tank cannon, it may be appreciated why Soviet fighter controllers referred to such machines as "the Stuka with the two long bars". This particular aircraft, W.Nr. 494230, flew with 10.(Pz)/SG 2 and was coded T6+MU with the unit code in smaller characters. The individual aircraft letter 'M' was in white, the Staffel colour, and was repeated on the front of each wheel fairing.

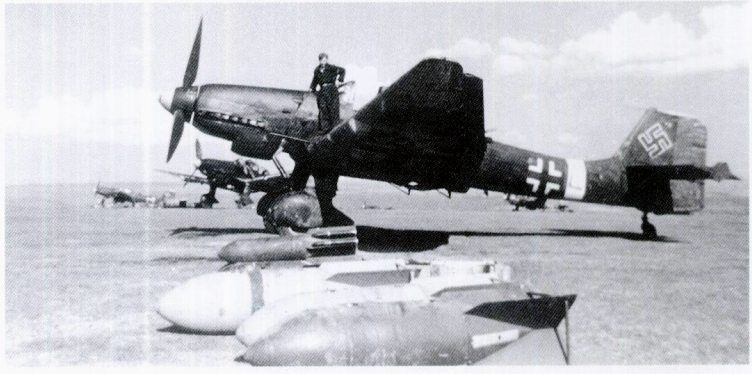
Junkers Ju 87 G-2, W.Nr. 494230 coded T6+HM belonging to 10./(PZ)/SG 2

Armed with two 37 mm anti-tank cannon, this aircraft had the standard factory splinter pattern of the two greens RLM 70/71 with the undersides painted in RLM 65 light blue. The unit code T6 was painted in black, one-sixth of the standard size letters and appears in front of the Balkenkreuz which is painted in just a white outline. The standard size letters HM are painted behind with the individual aircraft letter 'H' being painted in the Staffel colour white which was also painted on the front of each wheel spat. The Hakenkreuz has also been painted in a white outline only, with the Werknummer 494230 also appearing in white having been applied using a stencil. The Eastern Front Theatre yellow fuselage band is also carried and the undersides of the wing tips have also been painted in the same colour.



The Schlachtflieger were often allowed to choose the letter assigned to their aircraft and frequently chose the first letter of their mother's, sister's or girlfriend's name. This Hs 129 B-2, based at Proskurov in southern Russia in March 1944, was flown by Lt. Walter Krause of 10.(Pz)/SG 9 and assigned the code 'White K' in memory of the pilot's girlfriend, named Karen. When Soviet attacks approached Proskurov on 12 March, the resident 10.(Pz)/SG 9 carried out repeated attacks and the ground personnel were kept very busy re-loading and re-arming the aircraft for their next mission. On that day alone, the Staffel destroyed 65 T-34s and immobilised a number of others.

By the end of March, the Soviet spring offensive in the south had recaptured the Ukraine, thrown the Germans back to eastern Poland and, in early April, was threatening the vital oilfields in Rumania. This advance had left the German 17th Army isolated in the Crimea and, on 8 April, the Soviets launched two powerful and simultaneous attacks to clear the peninsula. *Luftwaffe* anti-tank support for the trapped army units began on 10 April with the arrival of 10.(Pz)/SG 3 with Ju 87 Gs and 10.(Pz)/SG 9 with Hs 129s. The latter went into action immediately and within three days had assisted in the destruction of 82 Soviet tanks. Nevertheless, 17. *Armee* was forced to retreat until only Chersones airfield remained in German hands. So overwhelming was Soviet air superiority over the area that the Fw 190s of *Major* Heinz Frank's II./SG 2 flew purely fighter sorties to assist the *Jagdflieger* in combating the formations of Soviet bombers. A number of pilots did especially well in this role, including *Lt.* August Lambert, *Hptm.* Günther Bleckmann and *Ofw.* Hermann Buchner, but German resistance in the Crimea collapsed on 17 May.



From 10 April to 13 July 1944, III./SG 2 was based at Husi, in Rumania. This photograph, taken at Husi in June or July 1944, shows the Ju 87 flown by Lt. Hans Koslowski and his Bordfunker, Uffz. Horst Klein. The aircraft is a D-5 and was coded T6+LS, with the T6 in small characters and the aircraft letter L in red on a yellow fuselage band. In October 1944, Lt. Koslowski was awarded the German Cross in Gold, and Uffz. Klein was similarly decorated in January 1945.

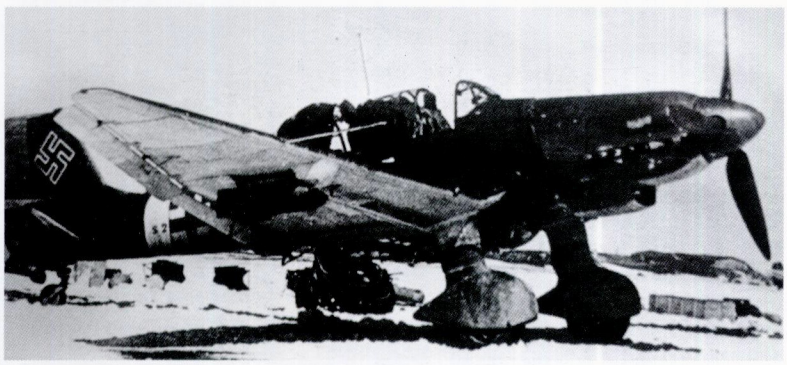
The introduction of the Fw 190 as a ground-attack aircraft at first made the provision of fighter escorts unnecessary, but on some fronts ground-attack operations without fighter escort were impossible due to Soviet air superiority. This had first become evident in January 1944 and resulted from improvements in the Soviet pilots' training and in the quality and quantity of their aircraft. Over time, as the Soviet pilots adopted better tactics and became more aggressive, the likelihood of the *Schlachtflieger* encountering sometimes large formations of enemy fighters therefore increased. Apart from Soviet fighter patrols over the combat area, attempts were made to intercept the *Schlachtflieger* over German-held territory, well before they reached the front line. With their latest Yak-1, Yak-3, Yak-7B, Yak-9 and La-5FN types, Soviet pilots were no longer alarmed by the once-feared Fw 190s, especially if they were recognised as ground-attack versions and not fighters. Whenever in a favourable position, the Soviet pilots always, therefore, accepted battle.

Eventually, since the number of *Luftwaffe* fighters available for escort duties was inadequate, the *Schlachtflieger* were obliged to undertake this task themselves. At first, part of the formation would be designated to intercept Soviet fighters, should the need arise. The SC 50 wing racks were removed from the escort machines to improve manoeuvrability and speed, and bombs were carried only under the fuselage. However, since their prime task remained close support for ground forces, they were permitted to jettison their bombs only in particularly critical situations.

Given the increasing Soviet aerial superiority, every *Gruppe* eventually had some pilots who had proved themselves experts in the dogfighting role. In June 1944, the shortage of fighter units on the Eastern Front resulted in II./SG 2 adding the pure interceptor role to its duties, and on 24 June it took off to attack an American raid on the Rumanian oilfields, during which it claimed two Mustangs and two Fortresses for the loss of three Fw 190s. After further similar operations against US bombers, circumstances again demanded that the *Gruppe* gradually relinquish its ground-attack missions in favour of fighter and fighter escort sorties. In September 1944, III./SG 2 was ordered to hand over its Ju 87s to I./SG 2 and withdraw to Germany to convert to the Fw 190, but this was not carried out. The Fw 190s of II. *Gruppe* were therefore frequently employed to escort the Ju 87 Ds of I. and III./SG 2, plus the tank-busting Ju 87 Gs of 10.(Pz)/SG 2.

On a cold spring morning in May 1944, SG 77 became the second Schlachtgeschwader to celebrate its 100,000th operational sortie. The Geschwader was visited by the commander of VIII. Fliegerkorps, Generalleutnant Hans Seidemann (far right), shown in conversation with Eichenlaubträger Oberstleutnant Helmut Bruck, SG 77's Kommodore. The 'Immelmann' Geschwader, SG 2, had reached this milestone a month earlier.

A formation of Ju 87 D-5s from I./SG 1 in early 1944. This Gruppe continued to fly operations in the East until withdrawn to convert to the Fw 190 in November and was thus the last but one Ju 87 Gruppe to convert to the Fw 190.



A Ju 87 D-5 of Stab/SG 77 photographed at Lemberg in Poland in March 1944. Later in the same month, this Geschwader began converting to the Fw 190.

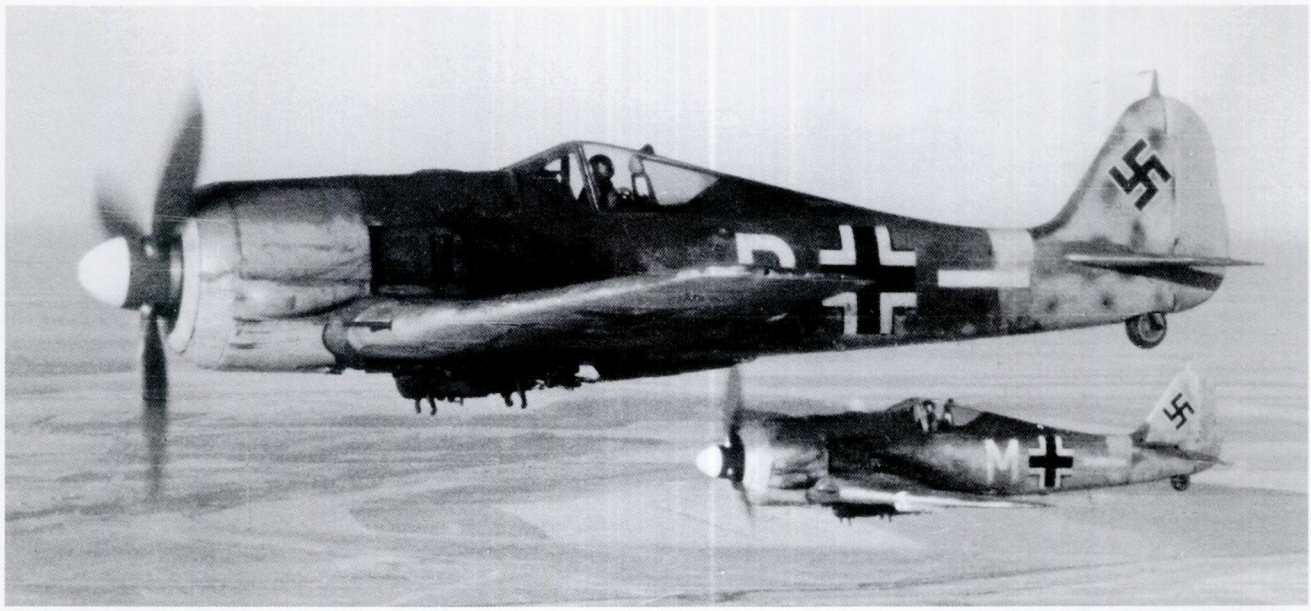
The Russian Summer Offensive of 1944

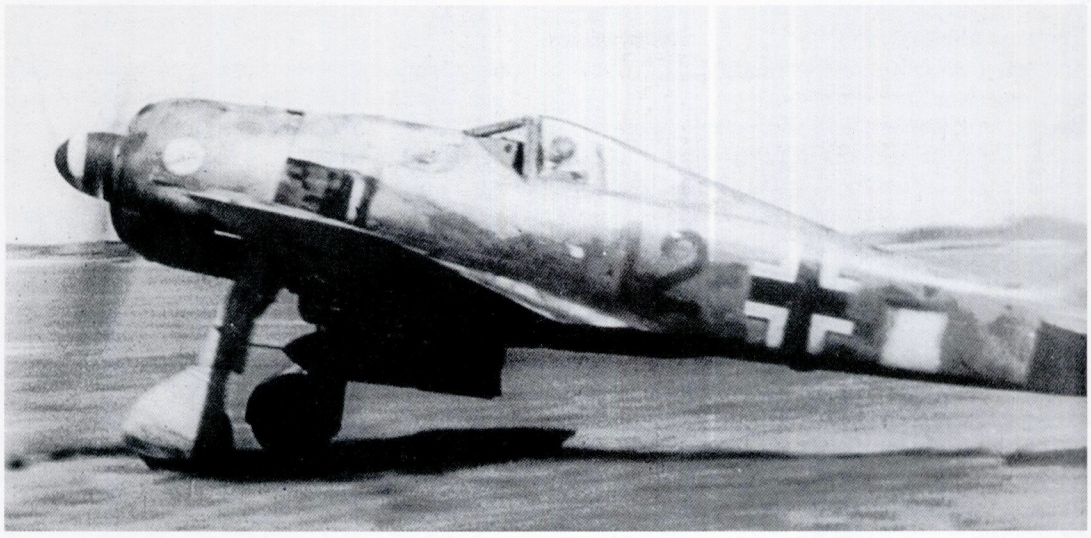
After the end of the fighting in the Crimea, the *Luftwaffe* used the succeeding lull to reorganise its forces and bring them up to strength in anticipation of the summer campaign. A Soviet attack was most expected in the area covered by *Luftflotte* 4 and Army Group North Ukraine, which was strengthened to protect the approaches to Rumania and the Balkans. Most close support units were therefore concentrated in this sector, so that by 31 May, *Luftflotte* 4 had absorbed no fewer than 446 of the total of 641 ground-attack aircraft available for the whole Eastern Front.

After an uneasy lull, the Soviet offensive opened on 9 June, not with the expected attack against Army Group North Ukraine, but with a heavy attack in Finland. When the Finns called for assistance, the Germans raised a Battle Group, *Gefechtsverbande* Kuhlmey, at Petseri in Estonia comprising I./SG 3 with Ju 87 D-5s, I./SG 5 with Fw 190 Fs and supported by Fw 190 A-8 fighters from JG 54. The Battle Group transferred to Immola and went into action immediately, flying 940 sorties on 21 June. *Gefechtsverbande* Kuhlmey subsequently provided the Finns with such valuable support that they were able to halt the Soviet advance in that area.

The main Soviet offensive, however, opened on 23 June against Army Group Centre which, because the main attack was expected further south, had been virtually stripped of aircraft and armour so that when the offensive opened, the Soviets were able to advance into a virtually tank-free zone. As the scale of the catastrophe became apparent, 300 of *Luftflotte* 4's ground-attack aircraft were transferred northwards to *Luftflotte* 6.

The situation worsened when the Soviets finally began their offensive against Army Group North Ukraine on 13 July. From then and throughout August the ground-attack and anti-tank aircraft were constantly engaged in heavy fighting in a vain attempt to halt the enemy's vastly superior ground forces. This was especially true of the Hs 129 *Staffeln*, most of which flew without respite and with considerable successes against Soviet armour. In the course of these operations, 13.(Pz)/SG 9, for example, destroyed 50 tanks in ten days, and *General* Siedemann, commander of VIII. *Fliegerkorps*, confirmed that the Hs 129 units were mainly responsible for halting Soviet attacks west of Sandomierz, where the enemy had established a bridgehead on the west bank of the Vistula. As for the *Schlachtflieger* as a whole, the critical position at the Front demanded the use of every available aircraft and crew. The withdrawal of the Ju 87 units for conversion to the Fw 190 therefore proved impossible and resulted in a further delay.





In the summer of 1944, SG 4 was withdrawn from Italy for employment on the Eastern Front and, apart from a two-month period in the West from October 1944 to early January 1945, remained there for the rest of the war. Here, 'Black 12', an Fw 190 F-8 of I./SG 4 is shown taking off for a ground-attack mission in Lithuania in late July 1944. Note the bomb under the fuselage has been modified to ensure it explodes above ground, so making maximum use of the sideways blast effect which would otherwise be smothered or directed upwards if the weapon penetrated the ground before exploding. The III. Gruppe of SG 4 included a Panzerblitz Staffel and in the period 21 January to 16 March 1945, it fired a total of 934 rockets. At the end of the war, SG 4 was in Czechoslovakia where it destroyed its remaining aircraft.

Above: An air-to-air view of two Fw 190s, easily recognisable as ground-attack machines from their letter codes, in flight over the Eastern Front. The aircraft letters and the II. Gruppe horizontal bar, both in yellow, would indicate the 7. Staffel, but it is not known to which Geschwader these machines belonged. Pilots of Ju 87 units converting to the Fw 190 appreciated the increased armament, power and speed of the Fw 190 but commented that in heavy rain, visibility through the armoured windscreen and the sides of the canopy was poor.

Despite local successes, the pace of the Soviet advance was such that whole German divisions were totally destroyed and the strength of others seriously reduced. In the summer of 1944, the German armed forces suffered some 400,000 casualties and the Soviets made enormous territorial gains, advancing some 600 km westwards to the East Prussian border in the north and gaining control of Poland east of the Vistula.

Meanwhile, on 1 August, bitter street fighting began in Warsaw when the Poles attempted an uprising to gain control of the city before the Soviets arrived. During the 63 day battle, I./SG 1 and, until mid-August, III./SG 77, supported the ground troops in the city, flying 204 missions amounting to 1,408 sorties. A further 711 sorties were flown by a separate *Einsatzschwarm* of four Ju 87s under I./SG 1's *Oblt.* Hans-Jürgen Klussmann which co-operated with Police and Army *Kampfgruppen* fighting in the city. By making shallow dive attacks over the city and releasing their bombs at low altitude, the Ju 87s were able to hit small, single targets. After their last attack, the leading aircraft fired green flares as a signal to the soldiers to rush forward under cover of the smoke and dust to seize the objective. At first, due to the fuel shortage, no fighter escort was provided for these missions but, after 19 September, when the *Einsatzschwarm* was attacked by Soviet fighters, four Bf 109s from I./JG 51 were assigned as escort.

Although the Warsaw uprising was finally crushed on 2 October, the Soviet advance had long since outrun its own supply capabilities and had been brought to a halt at the end of August. For the *Schlachtflieger*, however, as soon as the Eastern Front stabilised, a new problem arose. Supplies of aircraft fuel grade C-3, as used by the Fw 190s, were very limited, whereas grade B-4, as used by the Ju 87s, was available in substantially greater quantities. Thus, although only I./SG 1 and III./SG 2 now remained to convert to the Fw 190, this was again postponed.

Thereafter, the shortage of aircraft fuel began to cause the first serious curtailment of *Schlachtflieger* operations. Attacks on concentrations of tanks and motor transport preparing for an attack were no longer possible, and operations were flown only after a Soviet attack had been launched. Since it was now possible only to destroy tanks on the battleground, the role of the *Schlacht-* and *Panzerschalchtflieger* became all the more important. But despite bitter fighting in the defence of Rumania and the vital oilfields, a combination

Hptm. Hendrick Stahl (with back towards camera), the acting Kommandeur of III./SG 2, briefing crews of the 8. Staffel at Husi in Rumania in the summer of 1944. On the left is Lt. Hans Koslowski, who at this time was standing in for Hptm. Stahl as Staffelkapitän of 8. Staffel. Both men survived the war.

Major Karl Kennel of II./SG 2 was one of the most successful Schlachtflieger, shown wearing the Oak Leaves, awarded in November 1944. By the end of the war, Kennel had completed 957 sorties and was credited with 34 aerial victories.

of Soviet might and the Rumanian defection defeated German efforts to hold the country and it was firmly in Soviet hands by early October. Units such as II./SG 2, III./SG 10 and 12. and 14.(Pz)/SG 9 were hurriedly evacuated to Hungary, the Germans seizing and taking with them any Rumanian aircraft capable of flying.

The Last Months

The Soviet advances of 1944 had brought the Soviets to the borders of East Prussia and, by January 1945, they were ready to push through western Poland and invade Germany itself. The Soviet attacks in Poland opened on 12 January and, despite their ferocious opposition, the German armies were swept back. Warsaw fell on the 17th; Peomerania in the north and Silesia in the south had fallen by 24 February, Soviet forces presenting a solid front along the Oder less than 60 km from Berlin.

After III./SG 1 eventually converted to the Fw 190 in December 1944, only III./SG 2 and the specialised anti-tank *Staffeln* were still flying the Ju 87. Thanks to the exploits of Hans-Ulrich Rudel – since 1 October 1944 the *Kommodore* of SG 2 *'Immelmann'* and soon to lose his lower right leg following serious wounds sustained while attacking tanks near Lebus on the Oder, on 8 February – the success of the machine in the anti-tank role is well known. Less familiar are the anti-tank and ground-attack operations mounted by the Hs 129. During the fighting in Silesia, the Hs 129 acquitted itself well, although an increasing number of attacks had to be broken off due to intense Soviet anti-aircraft and fighter defences.

The Fw 190, however, could absorb more battle damage than the Hs 129, and experience with some Fw 190 *Staffeln* re-equipped with *Panzerblitz* rockets showed that it was well suited to anti-tank operations. No great technical difficulties had arisen, and little training was required in the use of the rockets which proved sufficiently accurate. Every hit usually resulted in a tank being set on fire, and after one attack on 24 January, it was found that 15 of the 16 tanks had been hit and destroyed with rockets. The Fw 190 was therefore deemed superior to the Hs 129 in this role and efforts were made to equip more Fw 190 units with rockets.

In February, the ground-attack units of *Luftflotte* 6 were heavily committed along the Oder-Neisse line before Berlin with the Fw 190s of SG 1, SG 2, SG 3, SG 4 and SG 77 attacking a wide variety of targets. Because of the serious situation, even experimental units, training units and units in the process of re-equipping were committed to the battle. Such extraordinary combat activity, however, could not be continued indefinitely because of the fuel supply situation. Thus, although *Luftflotte* 6 was given preference in fuel allocations, stringent restrictions were imposed so that smaller numbers of aircraft were committed except at critically important locations where decisive results could only be obtained by strong forces.

The nature of the struggle being fought on the Eastern Front demanded that the destruction of Soviet tanks was the most pressing demand. One unit which had converted to the *Panzerblitz* was I./SG 3 which operated in Kurland. Each of this *Gruppe's* anti-tank *Schwarm* was accompanied by two *Schwärme* carrying containers of small fragmentation bombs to suppress ground defences and permit the rocket-armed aircraft to concentrate on their mission relatively undisturbed. Moreover, after releasing their bombs, the bomb-carrying aircraft could then provide fighter protection for the anti-tank aircraft. As this proved successful, similar tactics were employed in Silesia, where *Panzerblitz* Fw 190s proved very successful and knocked out so many tanks that the enemy was sometimes forced to withdraw. Naturally, the Soviets sought countermeasures, and whenever the *Panzerblitz* aircraft approached, their tanks immediately sought cover and often could be located only from their tracks. The crews, however, usually attempted to erase these signs by dragging branches behind their tanks and attempted to hide by driving into houses and haystacks. When operating in woodland, the Russians, always experts in the art of camouflage, concealed their tanks by covering them with branches. In the air, *Panzerblitz* and *Panzerschreck* aircraft were singled out for attack by Soviet fighters.

The following details offer a snapshot of the efforts of the *Schlachtflieger* in the final battles in the East, including units, targets and scale of effort involved. On 27 February, it was reported that 74 Fw 190s from

An Fw 190 being armed in the late autumn of 1944. Note the yellow V under the port wing. This was introduced at the beginning of September 1944 following the defection of Rumania and the appearance of German aircraft operating in support of the Soviets. After 0600 hrs on 25 September, any German aircraft seen operating without the V would be assumed hostile and could be attacked. Mainly applied to aircraft operating with Luftflotte 4, it was also applied to Luftflotte 6 aircraft operating on the border between the two Air Fleets.

II./SG 1, III./SG 1 and 13./SG 151, plus eight Ju 87s of 1.(Pz)/SG 9 had attacked tanks and motor transport, during which nine tanks, one assault gun, an armoured car and three anti-tank guns were destroyed with others damaged.

On 5 March, 14 Fw 190s of I./SG 4 attacked enemy-held buildings in Breslau, while near Lauban 33 Fw 190s from II./SG 4 and *Stab* and II./SG 77 attacked anti-tank, mortar and infantry positions, and enemy armour was attacked by rocket-firing Fw 190s of 5.(Pz)/SG 77. Near Stargard, *Stab* and II./SG 3 bombed enemy strongpoints, and 37 *Panzerblitz* Fw 190s from 13./SG 151 attacked tanks and motor transport. Meanwhile, 1.(Pz)/SG 9 mounted 23 Ju 87 anti-tank sorties causing two tanks to explode and setting six on fire. Three more were immobilised and although a smokescreen prevented the full results of attacks on 11 other tanks from being observed, five were hit in the turret and hull.

Also in early March, *Stab*, II. and III./SG 1 were evacuated by sea from the Danzig area, with flying personnel, particularly *Panzerschlachtflieger*, being ordered to the Berlin area where, by 21 March, they had joined II./SG 3, I.(Pz)/SG 9 and the entire SG 77 complete with 10.(Pz)/SG 77. Fuel supply remained a problem and resulted in the rocket-firing Fw 190s of 6./SG 1 being unable to fly for almost a week. Similarly, it proved difficult to operate mixed types from the one airfield when only one type of fuel was stocked, as at Cottbus where III./SG 77 required C-3 for its Fw 190s while the Ju 87s of 10.(Pz)/SG 77 used B-4.

Later in March, ten Fw 190s from 2./SG 3 attacked tanks on the 21st and eight Fw 190s of I./SG 4 attacked transports south of Grottkau. Two days later, 77 Fw 190 sorties were flown against tanks and lorries by I. and II./SG 4 while, despite heavy flak and fighter defences, eight more tanks were destroyed by the Hs 129s of 10.(Pz)/SG 9. In a further 50 Fw 190 and 15 Hs 129 sorties in the Leobschütz-Neustadt area, attacks on supplies, positions, lorry columns and enemy infantry were flown. By the end of the month, 10.(Pz)/SG 9 had knocked out 100 tanks, 30 assault guns and several hundred vehicles for the loss of two aircraft, so that with a total of almost 600 tanks to its credit, it was the highest-scoring *Panzerjägerstaffel* in the *Luftwaffe*.

By early April it was clear that the Soviets were preparing for a major offensive against Berlin, and *Luftflotten* 4 and 6 were instructed urgently to equip four additional Fw 190 *Panzerblitz Staffeln* to further reinforce the *Schlachtflieger* in the East. On 6 April, 31 Fw 190s from II./SG 77 attacked bridges, columns and convoys. In addition, nine Fw 190s attacked Schönefeld airfield and strafed enemy traffic on the way home, while ten other Fw 190s attacked the airfield at Aslan.

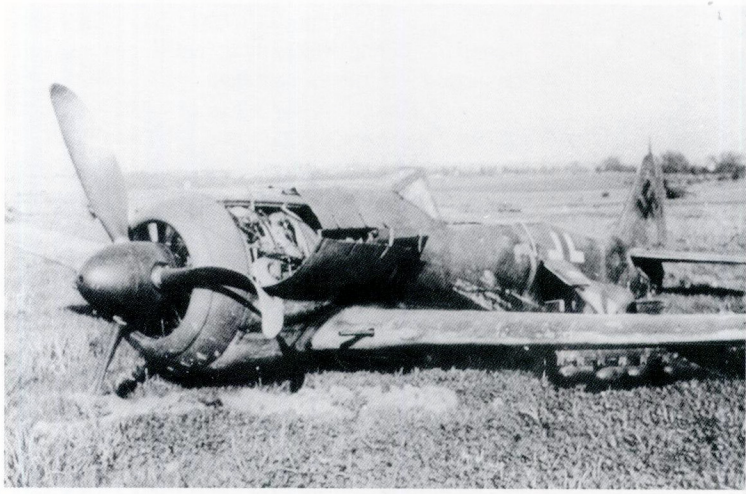
East of Frankfurt on the Oder on the same day, four Fw 190s of I./SG 1 attacked railways, a station and a goods train, while 16 of the *Gruppe's* aircraft also attacked a bridge spanning the Neisse at Görlitz, some 180 km south of Berlin. Bridges were important targets and were frequently attacked by the Fw 190s of SG 1. As an incentive to pilots wishing to win an award, a good hit on a bridge was counted as the equivalent of one aerial victory, a measure which apparently had the desired effect.

On 8 April, 17 of I./SG 4's Fw 190s attacked enemy positions, artillery, motor transport and a convoy; II./SG 77 sent 38 Fw 190s to attack enemy traffic and other targets; I./SG 1 sent eight Fw 190s to attack road and rail traffic near the Oder with bombs and rockets; 16 Fw 190s of II./SG 1 made a late afternoon attack against a bridge; and an hour later, III./SG 1 sent 12 Fw 190s to attack the same bridge which was broken in three places. On 10 April, 24 Fw 190s from I./SG 77 and 48 from II./SG 77 bombed and strafed columns on the Breslau-Liegnitz Autobahn with very good results, destroying a fuel tanker and 43 other vehicles but losing one pilot killed and four reported missing. On 16 April, the US Air Force raided 40 airfields in Germany and Bohemia, and at Klecany practically all of III./SG 2's Ju 87s were either totally destroyed or badly damaged. Two days later, the *Gruppe* was again ordered to re-equip with Fw 190s. Some progress was made in this connection when Fw 190 F-8s and F-9s were received, but although it was intended that 9. Staffel was to have *Panzerblitz* rockets, the *Gruppe* played little part in any further battles.

The battle for Berlin began on 16 April. At first, little progress was made, but by the 20th, German resistance had been broken and the Russians advanced to encircle Berlin. Some *Schlachtflieger* were now called upon to air-drop supplies to the beleaguered ground forces, *Major* Helmut Viedebannt, the *Kommodore* of SG 10, being killed on a supply mission on 1 May.

When Berlin surrendered on 2 May, the only sizeable German force left in Europe was Army Group Centre in Czechoslovakia. As Soviet forces pressed the Germans from the north, south and east and US forces closed from the west, *Luftwaffe* units from all corners of the disintegrating Reich flew to airfields in Czechoslovakia. In May, some *Schlachtflieger* were committed against a Czech uprising, and when the airfield at Vysoké Mý to was attacked, *Major* Arnulf Blasig, the *Kommandeur* of III./SG 10, imposed martial law and firmly suppressed any perceived hostility in the area. Similarly, *Obstlt.* Rudel, having returned to operations despite his wounds, ordered punitive raids by ground troops while SG 77 mounted several sorties against insurgents in Prague. The depleted III./SG 2 flew its last mission of the war against partisans near Prague.

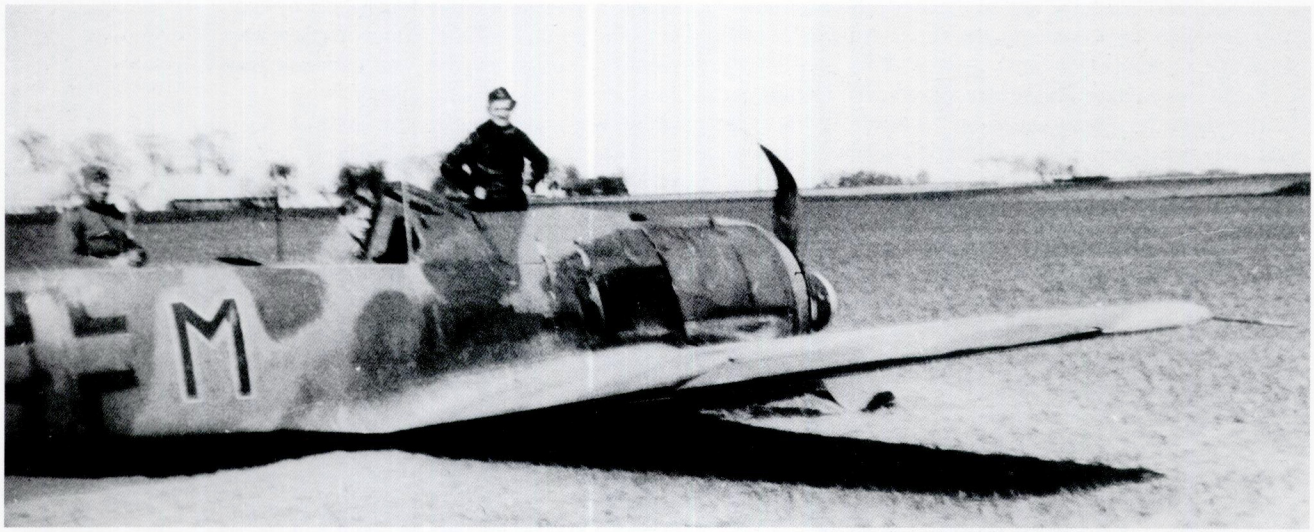
With the final German capitulation on 8 May, the *Schlachtflieger* on what was left of the Eastern Front included parts of SG 1 and SG 3 in the Kurland Pocket, while units in Czechoslovakia and Austria included the whole of SG 2, SG 4, SG 10 and SG 77 and parts of SG 9. Rather than await capture by the Russians, some pilots flew out to surrender to Anglo-American forces, but with large numbers of ground personnel in their charge, most commanders remained loyal to their men and refused to leave them. Some succeeded in marching to the US lines, but the majority of the Eastern Front *Schlachtflieger* remained as PoWs in areas occupied by the Soviets.



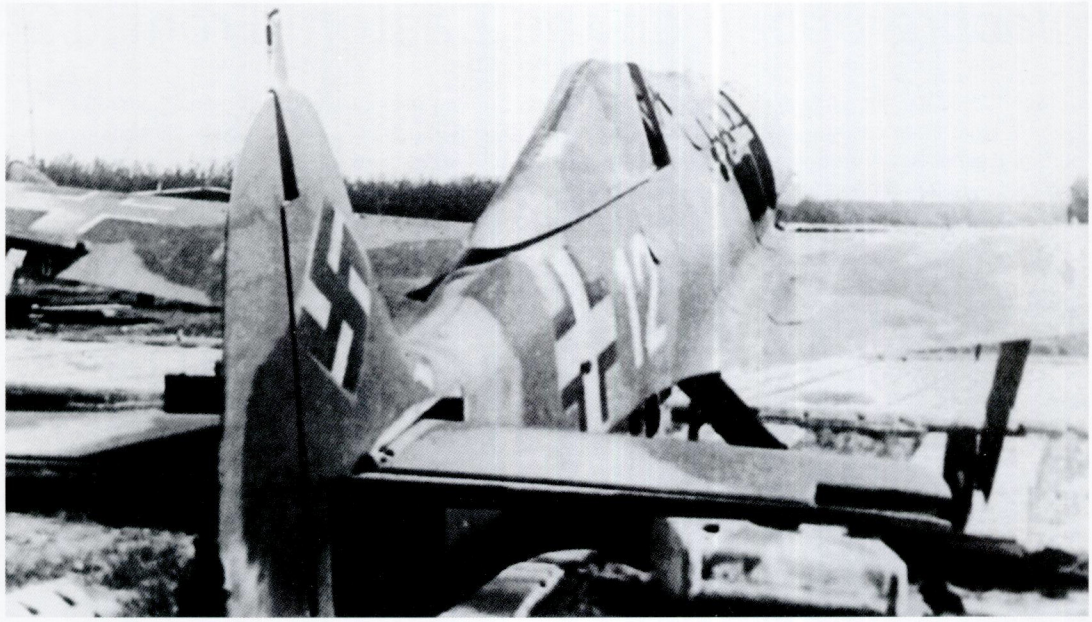
Above: The Hs 129 B-3. Only 23 production Hs 129 B-3s, which carried a 75mm BK 7,5 cannon under the fuselage, were completed between July and September 1944. When introduced with 10.(Pz)/SG 9 and 13.(Pz)/SG 9, the type has some success, even against the largest Soviet tanks, and in a period of 13 days, 10.(Pz)/SG 9 fired 47 of the 75 mm rounds despite a daily average of only two Hs 129 B-3s being available. This example, W.Nr. 162053, was abandoned in the winter of 1944/45 and captured by Soviet troops.

Late war outline style national insignia on an Fw 190 F-8 of 4./SG 3. This particular machine was surrendered to US forces on 19 April 1945 when its pilot, Uffz. Gerhard Kürschner, landed at Frankfurt Rhein-Main airfield after flying three sorties that day against Soviet bridgeheads on the Oder river. Note the areas of repainting on the rear fuselage and tail, and also the exposed wiring of the ETC 501 under the fuselage.

Above: Although 13 ground-attack Staffeln had been equipped with anti-tank rockets by 20 April 1945, only comparatively few photographs exist showing rocket-armed Fw 190s. This example, 'Yellow 2' photographed at Chrudim in Czechoslovakia in 1945, is armed with Panzerblitz 1 rockets and almost certainly flew with 9./SG 77. As the 'Gartenzaun' launching frame could not be jettisoned, pilots had to land with undischarged rockets on board. Considering the difficulties facing German industry in the last months of the war, the number of rockets manufactured is astonishing. The highest output for Panzerschreck was in January 1945 when 13,450 were manufactured, and the corresponding output for Panzerblitz was 14,570. All were used on the Eastern Front in the same month they were produced. Depending on the area struck, tanks hit by anti-tank rockets invariably caught fire immediately or soon afterwards, but the crews were usually killed immediately by the blast or splinters inside the tank.

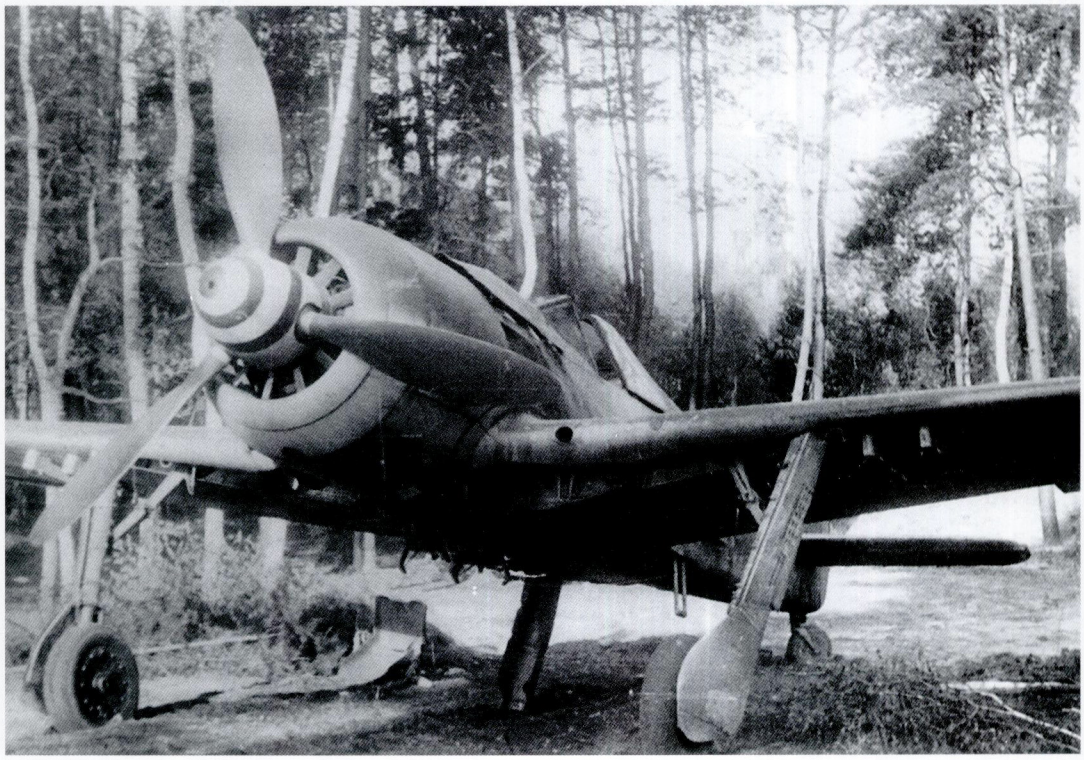


A crash-landed Fw 190 F-8 of III./SG 3. This Gruppe operated in Kurland in the closing months of the war, but when the unconditional German surrender came into effect on 8 May 1945, three of the unit's personnel flew to Sweden in this aircraft to avoid capture by the Soviets. The uppersurface camouflage is unusual and is thought to be 75 with large patches of 83 extending down the fuselage sides. The undersurfaces were 76 and the wing tips were yellow on the top and bottom surfaces. The tactical letter 'M' was in black, narrowly edged in white, and a black vertical III. Gruppe bar, possibly also outlined in white, was positioned behind the late war outline style fuselage Balkenkreuz. The continued use of letters at this stage of the war was not uncommon.



Another example of an airframe reworked as an F-8 is shown in this view of 'White 12' of an unknown unit at war's end. The camouflage would appear to be a mixture of the original sprayed 74 and 75 with newer areas of 81 and 83 applied by brush.

Above: Rather than remaining to be taken prisoner in Soviet-occupied territory, the pilots of these ground-attack Fw 190s flew to an airfield occupied by US troops to surrender. The horizontal bar on the rear fuselage indicates that these aircraft belonged to the II. Gruppe of a Schlachtgeschwader and although the unit is not known, each of the machines has a yellow band around its engine cowling and a yellow rudder. These markings were applied in accordance with an instruction issued in March 1945 calling for certain types of aircraft operating under Luftflotte 4 to carry these markings in place of the earlier yellow V wing marking mentioned previously.

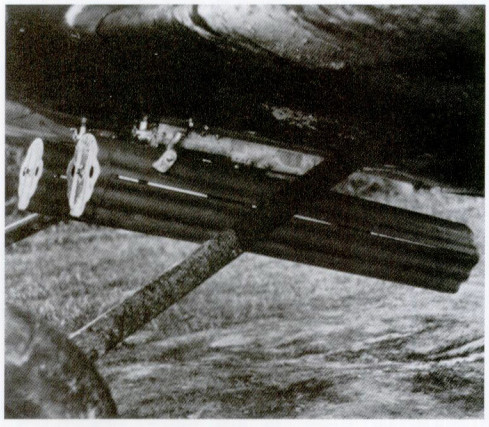


Left and above: These Fw 190 F-8s of II./SG 77 were found abandoned at Pardubice in May 1945. Both aircraft have a black and white spiral on an otherwise yellow spinner, but different styles of underwing Balkenkreuz. Although the reorganisation and modernisation of the Schlachtflieger was carried out too late and only came when conditions at the Front had deteriorated beyond the point when any policy could succeed, the Schlachtflieger's performance in the field was nevertheless very creditable, and it gained the reputation of being the toughest and most successful arm of the Luftwaffe.

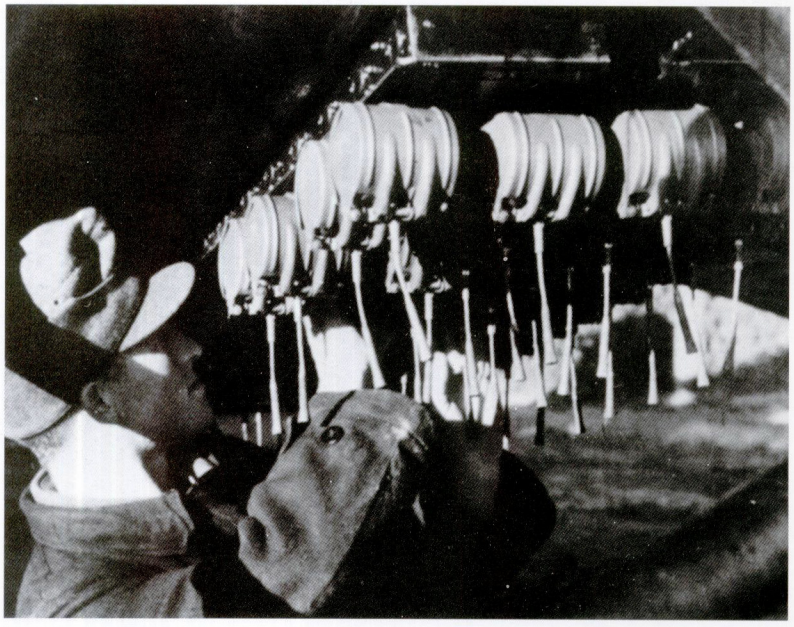
Nachtschlachtgruppen on the Eastern Front, 1943-1945

Between 1943-45, the *Luftwaffe* deployed a wide variety of often obsolete, adapted training aircraft on the Eastern Front in so called *Nachtschlachtgruppen*– night ground-attack units – to conduct night-bombing sorties against Soviet troops and partisans. These units often consisted of crews drawn from transport and liaison duties as well as airmen declared unfit for high-performance flying. The aircraft carried a variety of ordnance on makeshift, field-applied racks and missions were usually conducted at low level.

Outdated 1940 converted Fokker CVs were operated by 2./NSGr 11 in Denmark in late 1943. The flying personnel of this Gruppe were all taken from Scandinavian volunteers.

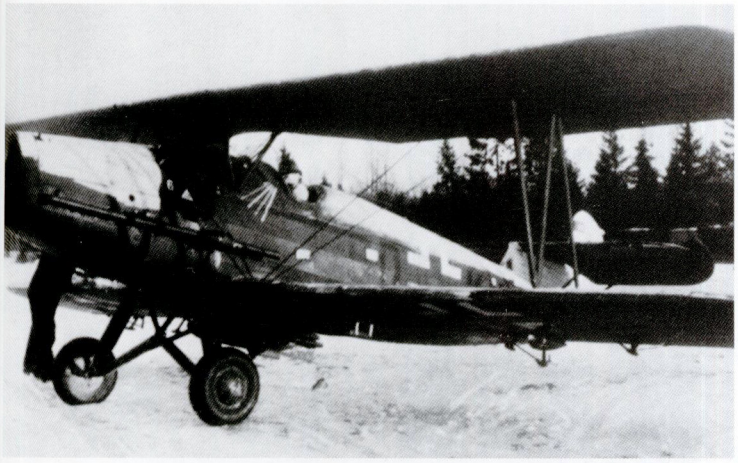


In a Nachtschlacht Rotte (two aircraft element) there was normally one aircraft whose task it was to find and illuminate the target just ahead of the attack machine. The container tubes, shown empty here, beneath the fuselage of this Gotha Go 145, were used to carry target flares.



Above: During the months without snow Nachtschlacht aircraft were painted black overall, and this often covered the Hakenkreuz on the fin. This bombed-up Go 145 belonging to NSG 3 is shown in a typical such finish.

The Nachtschlacht units employed a wide variety of ordnance and this Heinkel He 46 has been fitted with 18 SD 2 anti-personnel bombs which were mainly used to drop on enemy ground troops.

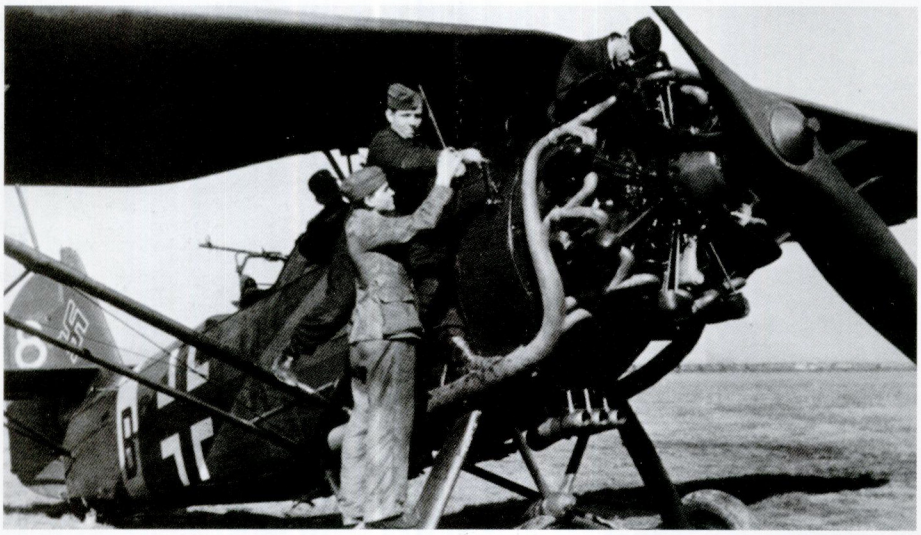


Above: An Arado Ar 66 C about to taxi off for another mission in daylight. Note that although the aircraft is a two-seater on many missions only the pilot was on board. For daylight operations the aircraft were often painted in washable uppersurface white winter camouflage with black undersides.

Oblt. Specht (back to camera) Staffelkapitän of NSGr 3 discusses a plan of operations with flight crews prior to a mission. New members of the unit are gathered round as well in order to learn the operational procedures, which would be so important for their survival.

Left: During October 1943, Nachtschlachtgruppe 11 was formed from Aufklärungsgruppe 127 flying He 50s. The unit operated from a make shift runway constructed from timber boards and in common with other Nachtschlacht units their aircraft were painted in the washable temporary white finish on the uppersurfaces. These photographs show aircraft returning from a mission.

These Arado Ar 66 Cs were operated by NSG 3 on the Eastern Front. The pilots seen here after returning from a mission are from left, Ofw. Ludwig Belloff, Oblt. Doye and Oberstlt. Beushausen, Kommandeur of NSG 3. Ofw. Belloff was one of the most successful NSG pilots who, after attaining his pilot's license in 1941, was transferred to 1./NSG 3 on the Eastern Front in December 1942. He made a total of 726 operational missions and was awarded the Ritterkreuz on 28 January 1945. He survived the war.



Above: Operating with Luftflotte 1 in the North was this Heinkel He 46 operated by NSG 1. In contrast with other NSG units these aircraft still carried the splinter pattern of RLM 70 black green and 71 dark green, on the fuselage, but the upper surface of the wing appears to have had RLM 02 added over the standard pattern with the undersides painted black. Note that the He 46 was also capable of carrying SC 50 bombs on the wings struts.

Ground crew carry out maintenance on the Bramo 322 engine of this He 46, 'White 8', belonging to NSG 4. Not only did the flight crew lead a very exposed existance flying such obsolete aircraft, but the ground crews had to cope with very improvised and poorly equipped airfields, living under very difficult conditions and performing most maintenance in the open.

Heinkel He 46, coded BC+1K, 'White 8' of Nachtschlachtgruppe 4, Eastern Front, late 1943/early 1944
The unit code, '1K', has been painted black in the unusual position in front of the fuselage cross. The letters 'BC' have been painted in front of the cross with the letter 'B' appearing over the yellow Eastern Front theatre fuselage band. A large number '8' appears in white on the rudder. The whole aircraft appears to be painted in RLM 70 black green and 71 dark green splinter pattern with black undersides.

Luftwaffe Ground-Attack Units in the Mediterranean - 1942-1944

by Andrew Arthy

Introduction

Throughout 1942 and 1943 there was a small but constant *Luftwaffe* ground-attack presence in the Mediterranean. Initially this presence consisted entirely of bomb-carrying Messerschmitt Bf 109s, but towards the end of 1942 Focke-Wulf Fw 190s and Henschel Hs 129s also arrived in the theatre. By mid-1943 the Germans were on the defensive, and the only *Luftwaffe* ground-attack aircraft left in the Mediterranean were Fw 190s.

February 1942 – 7 November 1942

Up to August 1942 there was no *Luftwaffe* ground-attack *Gruppe* based in the Mediterranean. Rather, there were a number of *Jabo Staffeln*, attached to fighter units.

10.(*Jabo*)/JG 53 was formed in early February 1942 under *Oblt.* Werner Langemann, and flew its first mission on 8 February. For the next four months 10.(*Jabo*)/JG 53 operated from San Pietro in southern Sicily against targets on Malta.

On 8 April 1942 6./JG 3 transferred from Sicily to Africa, where it flew ground-attack missions with the Bf 109 F-4 until it left on 25 April 1942.

10.(*Jabo*)/JG 27 was formed in North Africa in May 1942, and operated in the desert until July 1942. The *Staffel* never had more than ten Bf 109 F-4/Bs on strength at any one time.

Throughout June and July 1942 *Luftwaffe* Bf 109 ground-attack aircraft flew daily missions in support of the Axis ground offensive launched by Rommel at Gazala on 26 May 1942. 10.(*Jabo*)/JG 53 moved from Sicily to Africa in mid-June 1942, and was initially based at Quotaifya.

Ground crew push a hydraulic bomb trolley loaded with a SC 250 bomb past a Bf 109 F of 10.(Jabo)/JG 53.

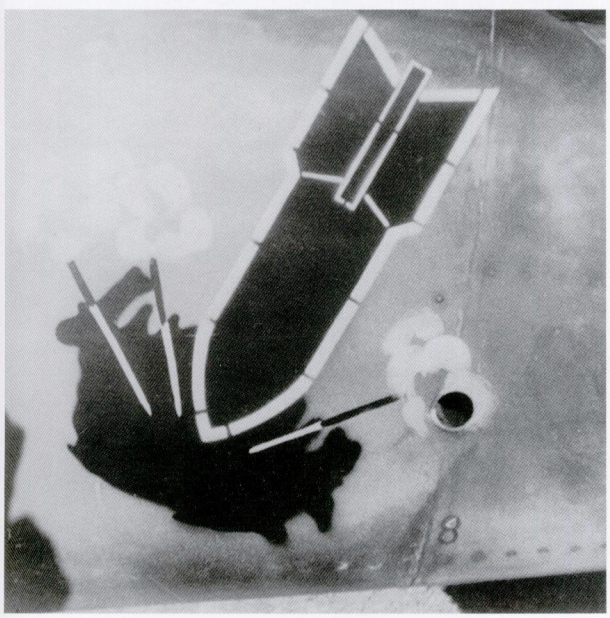
The Focke-Wulf Fw 190 arrived in North Africa in July 1942 with an experimental unit, *EKdo* 19, attached to the Rechlin Experimental Station. One of the tasks of this unit was to determine if the Fw 190 could serve in the ground-attack role in tropical conditions.

Towards the end of August 1942 *Jabogruppe Afrika* was formed by amalgamating 10.(*Jabo*)/JG 27 and 10.(*Jabo*)/JG 53.

In the last week of August 1942 III./ZG 1 arrived in North Africa. This *Gruppe* had seen service on the Eastern Front from mid-May to August 1942, flying bomb-equipped Bf 109 E-7s. The *Gruppenkommandeur* was *Major* Roland Borth, but he was shot down and badly wounded in Egypt on 1 September 1942. He died eight days later. *Major* Borth was replaced by the very experienced *Major* Siebelt Reents.

During September 1942, Bf 109 ground-attack aircraft in North Africa flew regular operations against artillery positions, tanks, vehicles, ammunition dumps, airfields, camps, and occasionally shipping. On an average day in September 1942 Bf 109 ground-attack units flew 15 to 25 sorties.

The emblem on the rear fuselage of the 10.(Jabo)/JG 53 Bf 109 Fs shows a bomb striking a 'map' of Malta. Commanded by Oblt. Werner Langemann, the unit was formed in early 1942 and flew its first mission on 8 February from San Pietro in southern Sicily against Malta.



During October 1942 III./ZG 1 was re-designated I./Sch.G 2.

The *Luftwaffe* ground-attack Bf 109s in North Africa saw little action in the first week of October 1942, although on 2 October two III./ZG 1 pilots were shot down by British fighters. On 9 October operations increased pace.

In October 1942 a new *Luftwaffe* ground-attack unit was formed in Sicily, the *Jabogruppe* O.B.S. Some of the unit's personnel came from St.G. 3, while others were men fresh from flying school. Missions to Malta began in the middle of October, and continued almost daily until 3 November 1942.

On 5 November 1942 the *Jabogruppe* O.B.S. transferred to North Africa, where it was incorporated into I./Sch.G 2. Around this time the *Jabogruppe Afrika* was also incorporated into I./Sch.G 2.

Meanwhile, in Egypt, General Montgomery began his attack at El Alamein on the evening of 23 October 1942. The Bf 109 ground-attack units were kept very busy in the days leading up to the British offensive, and even more so after it began.

Apart from the normal SC 250 kg bomb, the Bf 109 Fs of the Jabo Staffel of JG 53 could carry an alternative load of four SC 50 kg bombs. Ground staff at St. Pietro in March 1942 using a makeshift loading device attach the bombs to the enlarged ETC carrier devised for their carriage. Note the whistles attached to the fins of the bombs in the foreground.

In November 1942 4.(*Pz.*)/Sch.G 2 briefly operated in Libya, although the aircraft's engines, lacking a suitable tropical filter, were sensitive to dust. They also had a tendency to overheat and generally proved unsuited to the desert conditions of this region. Subsequently, the unit was forced to fall back until, by January 1943 when the Staffel was in Tunis, a combination of technical difficulties, combat attrition and Allied bombing raids had reduced the strength of the unit to only one aircraft. Although it was intended that the unit would re-equip at Bari in southern Italy so that it could rejoin operations in Tunisia, the pilots proceeded instead to Berlin where they collected new machines. The Staffel then made its way to the Eastern Front, arriving in time to take part in the Kursk offensive.

8 November 1942 – 7 December 1942

On 8 November 1942 there were Anglo-American landings in Morocco and Algeria. In response, the Germans promptly occupied Tunisia. Amongst the many forces dispatched to this new front were two *Luftwaffe* ground-attack units: III./ZG 2 equipped with the Fw 190, and 5.(*Pz.*)/Sch.G 1, equipped with the Hs 129.

III./ZG 2 had been formed in April 1942 and had flown the Bf 109 E-7 in ground-attack operations on the Eastern Front during the early stages of the 1942 German summer offensive. It had then been withdrawn to re-equip, and became the first ground-attack *Gruppe* in the *Luftwaffe* to be wholly equipped with the Fw 190. It was transferred to the Mediterranean on 3 November 1942. III./ZG 2 transferred from Sicily to Sidi Ahmed in northern Tunisia on 15 November 1942. The unit went into action on the very next day, attacking advancing Anglo-American infantry columns near the coast.

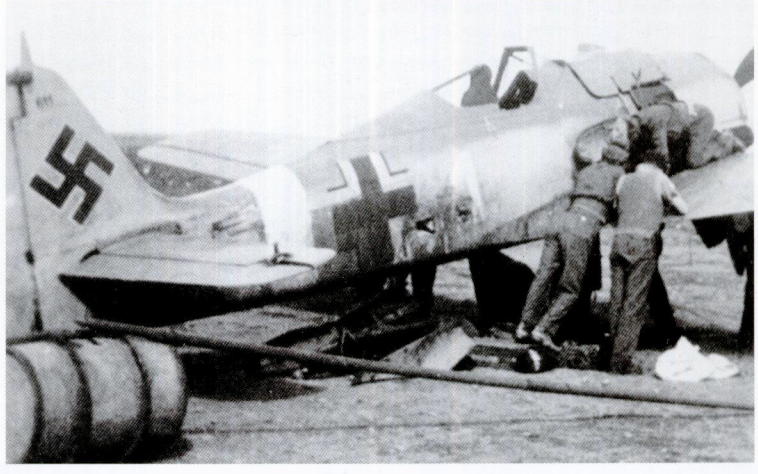
III./ZG 2 was soon followed to Tunisia by a second ground-attack unit. This was 5.(*Pz.*)/Sch.G 1, equipped with the Hs 129 B-2. This *Staffel* had previously seen service on the Eastern Front. It flew its first mission in North Africa on 30 November and claimed one tank destroyed.

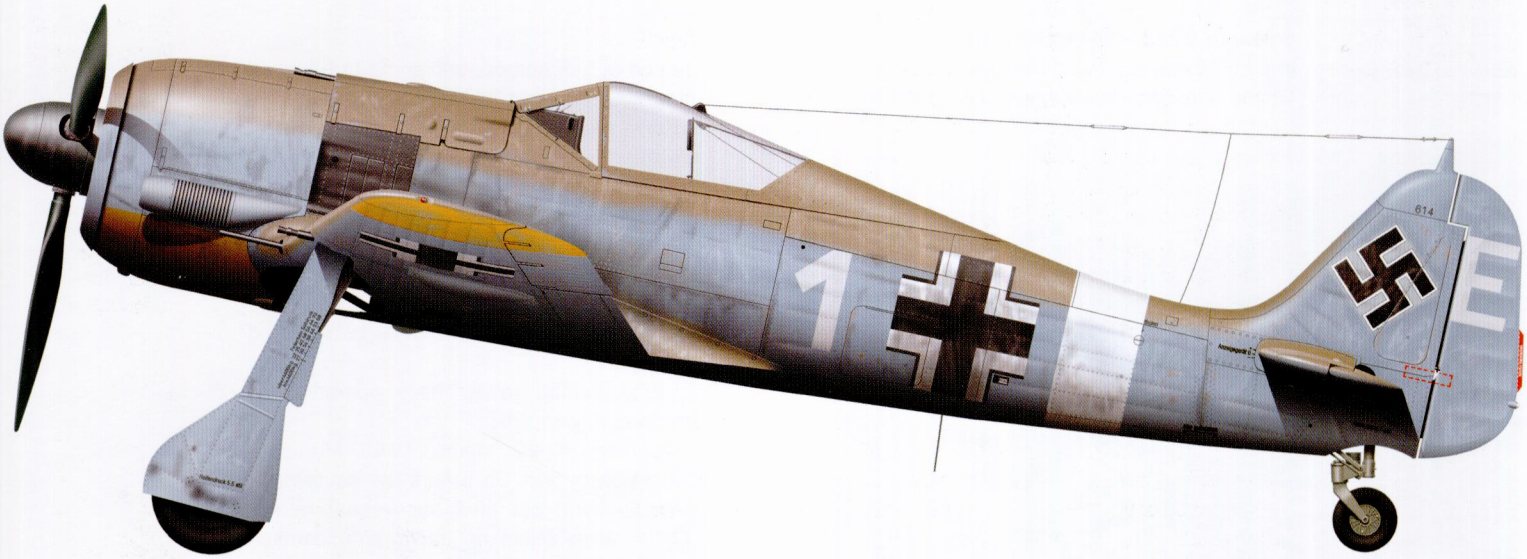
On 25 November 1942 the Allies began an offensive to destroy the tenuously-held German bridgehead in Tunisia, but this was halted after five days in the face of strong resistance from German ground troops, and just as significantly, from the *Luftwaffe* dive-bomber and ground-attack units. The *Luftwaffe* gained a degree of air superiority over the battlefield, prompting the Allies to cancel daytime vehicle movements due to the threat from the air. On 1 December the Germans began a counter-offensive with all available forces. III./ZG 2 and 5.(*Pz.*)/Sch.G 1 supported this attack with many missions, although lack of serviceable aircraft was now becoming a problem for both units.

Meanwhile, in Libya I./Sch.G 2 was kept busy attacking the usual targets: airfields, tanks, vehicles and troops. During November I./Sch.G 2 supported the German army as it fell back from Egypt as best it could, although the fuel situation restricted operations at times. By the end of November 1942, I./Sch.G 2 was the only Bf 109 ground-attack unit in the Mediterranean, and had on strength a mixture of Bf 109 E-7s and Bf 109 F-4s from a variety of units.

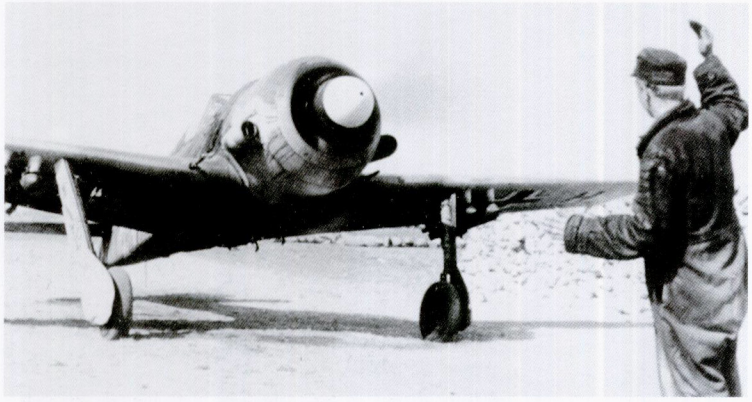
On 27 March 1942, Uffz. Felix Sauer of 10.(Jabo)/JG 53 experienced engine failure and force-landed his Bf 109 F-4, 'White 3' W.Nr. 7473 on the beach near Pozzallo. It subsequently became a total loss from the rising tide.

The Fw 190 first appeared in North Africa in July 1942 in a non-combat role. On 1 July, a trials unit was formed at Castel Benito airfield for the purposes of testing Bf 109s and Fw 190s in the ground-attack role in tropical conditions. The unit was designated Erprobungskommando 19, and it was attached to the Luftwaffe's major testing facility at Rechlin. Ekdo 19 received a complement of two fighter instructors and six students, possibly from the Ergänzungsgruppen of JG 53 and JG 27, along with some Fw 190s and Bf 109s. Unfortunately no details are known of Ekdo 19's combat testing or operations. This Fw 109 A-4 'White 1', W.Nr. 0145 614 belonged to Ekdo 19 and was found by Allied troops at Benghazi airfield in Libya in November 1942.





Focke-Wulf Fw 190 A-4 'White 1', W.Nr. 0145 614 of Erprobungskommando 19, November 1942
'White 1' carried a tropical camouflage scheme of RLM 78/79/80 with a standard white theatre band around the rear fuselage. The Werknummer in black on the fin only shows the last three digits, a common practice seen on some Luftwaffe aircraft. The large 'White E' on the rudder indicates that the aircraft belonged to a trials unit, and this was again a common marking for such Luftwaffe units during the war.



II./SKG 10 was formed in December 1942 by redesignating III./ZG 2. Here, a member of the ground staff is guiding a bombed-up Fw 190 of III./SKG 10 from its dispersal.

8 December 1942 – 13 February 1943

With the conclusion of the German counter-offensive in northern Tunisia on 7 December 1942, the ground fighting in Tunisia was much reduced for around two weeks, as both sides underwent a period of reorganization. III./ZG 2 and 5.(*Pz.*)/Sch.G 1 continued to fly operations to the best of their abilities, although poor weather and lack of aircraft were two significant limiting factors.

III./ZG 2 was re-designated III./SKG 10 around mid-December 1942.

From 20 December 1942 to 13 February 1943 the ground-attack Fw 190s and Hs 129s kept up a steady rate of missions to attack targets in northern and central Tunisia. In late December and throughout January there were regular German air attacks on Bône harbour by escorted Fw 190s and Ju 87s.

Early January 1943 also saw the *Luftwaffe* turn its attention to central Tunisia, where French and American troops were making their presence felt through a series of attacks. On a few occasions Fw 190s were transferred to Kairouan airfield, 180 km south of Sidi Ahmed, to allow missions to be flown against targets in this mountainous area of Tunisia. Some of the American forward airfields, notably Thelepte, were on the receiving end of Fw 190 raids.

5.(*Pz.*)/Sch.G 1, now re-designated as 8.(*Pz.*)/Sch.G 2, continued to fly small but effective missions over central Tunisia throughout the period 20 December 1942 to 13 February 1943.

I./Sch.G 2 rested for much of the second half of December 1942. In early January 1943 the *Gruppe* flew a series of successful missions to attack the Hamraiet landing grounds and other targets in the area. I./Sch.G 2 continued to withdraw westwards in January and February, and was soon based in southern Tunisia. Operations by the *Gruppe* continued apace in the first half of February.

14 February 1943 – 5 March 1943

On 14 February 1943 the Axis launched a bold offensive in central Tunisia, taking the Allies completely by surprise, and enjoying some good initial success. III./SKG 10 transferred to Kairouan airfield on the morning of 14 February, joining II./JG 2 and the *Stab* of JG 53 at that airfield. III./SKG 10 contributed six missions on the opening day of the offensive.

On 14 February 1943 I./Sch.G 2 had just ten Bf 109s serviceable, and the unit did not take part in the German offensive. Instead, I./Sch.G 2 continued to operate in southern Tunisia, for example, flying three missions against its former airfield at Medenine on 26 February 1943.

After the Allies halted the Axis offensive in central Tunisia, Axis attention turned to northern Tunisia, where a short-lived offensive began on 26 February. III./SKG 10 was mostly back at Sidi Ahmed again, and was able to contribute many missions in support of the ground troops.

Another unidentified Fw 190 in North Africa, this example having external sand guards fitted to the air filter. On untropicalised aircraft, the air filters were concealed under blisters on the engine cowling.

6 March 1943 – 14 April 1943

In early March III./SKG 10 was split up, with some Fw 190s based at Sidi Ahmed, and some at Gabes-West on the southern front, where *Feldmarschall* Rommel was preparing for what would prove to be his final offensive in North Africa.

Rommel's attack at Medenine began on 6 March 1943, and after some bad morning weather cleared, it was supported by two missions against tanks by I./Sch.G 2, and two missions against an airfield and artillery by III./SKG 10. Both units flew more missions to the Medenine area on the next day.

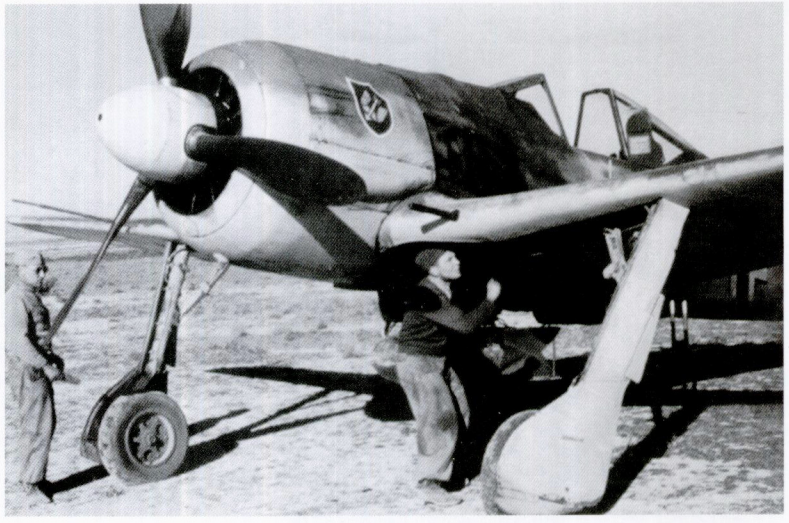
On 7 March the majority of III./SKG 10 returned to northern Tunisia.

I./Sch.G 2 continued to fly daily operations over southern Tunisia during March.

On the evening of 20 March 1943 Montgomery attacked at the Mareth line. On 6 April the southern front was at the Wadi Akarit, but after successfully attacking there, the Eighth Army rolled on northwards across the central Tunisian coastal plain. The German bridgehead in Tunisia had now been seriously reduced.

As April began III./SKG 10 was based at Sidi Ahmed, but had a detachment on the southern front, at La Fauconnerie.

In April I./Sch.G 2 received some Bf 109 G-2s. However, in the first half of that month the unit transferred



Two photographs showing ground crew checking over an Fw 190 A-4 of III./SKG 10 prior to another sortie. The aircraft has already been loaded with an SC 250 bomb and there are a number of oil streaks on the engine cowling. Also visible on the port wing is the small rod close to the undercarriage attachment point which indicated to the pilot whether the undercarriage was retracted or extended. Although it has been suggested that the background colour of the shield emblem may have been red or, alternatively, varied according to the particular Staffel, comparison with the red area on the headrest warning notice and the red stripe across the extended footstep would strongly suggest that on this machine at least, the background was dark blue. This aircraft does not appear to have the usual yellow panel under the nose.

from Tunisia to Bari in southern Italy, where it was to convert to the Fw 190.

15 April 1943 – 13 May 1943

The middle of April 1943 saw some significant changes for the *Luftwaffe* ground-attack units in the Mediterranean. The last Hs 129 operation was flown in Tunisia on 27 April 1943, after which the Hs 129s left. However, the effectiveness of the Fw 190 as a ground-attack aircraft in situations of air inferiority was demonstrated by the fact that a new Fw 190-equipped ground-attack unit, II./Sch.G 2, began arriving at Sidi Ahmed on the afternoon of 18 April 1943. II./Sch.G 2 was under the leadership of the very capable and experienced *Hptm.* Werner Dörnbrack.

Fw 190s flew operations over Tunisia until 8 May 1943, after which they were evacuated to Sicily.

14 May 1943 – 9 July 1943

After the fall of Tunisia, the *Luftwaffe* ground-attack units in the Mediterranean enjoyed a comparatively quiet time for a few weeks. III./SKG 10 and II./Sch.G 2 flew a handful of operations in the three weeks after the fall of Tunisia, including one to Malta, and some missions in the fighter role.

On 5 June 1943 III./SKG 10 and II./Sch.G 2 began to participate in anti-shipping missions in the region around Pantelleria and Cap Bon. These missions enjoyed some success, and continued through most of June.

The *Stab*, II. and IV./SKG 10 arrived in the Mediterranean theatre in mid-June 1943, fresh from flying day and night raids against England.

Bombing of *Luftwaffe* airfields on Sardinia and Sicily began to impact badly on the Fw 190 ground-attack units in June and the early days of July, as the Allies prepared the way for their forthcoming invasion of Sicily. The ground-attack units were even briefly deployed as fighters to counter these raids in early July 1943, with little success.

10 July 1943 – 16 August 1943

The British and Americans invaded Sicily on 10 July 1943. For three days SKG 10, based in eastern Sicily, and Sch.G 2, based in western Sicily, flew many missions over the beachhead. However, the decision was soon made to evacuate the *Luftwaffe* from the island, and by 14 July 1943 Fw 190 operations over Sicily had ceased.

They recommenced a week later, now flying from bases in southern Italy against ports on the east coast of Sicily, notably Augusta and Syracuse. As the ground fighting drew closer to their bases late in July, the Fw 190 units also flew some operations in support of the German army.

IV./SKG 10 was transferred out of the Mediterranean during August 1943, and never returned.

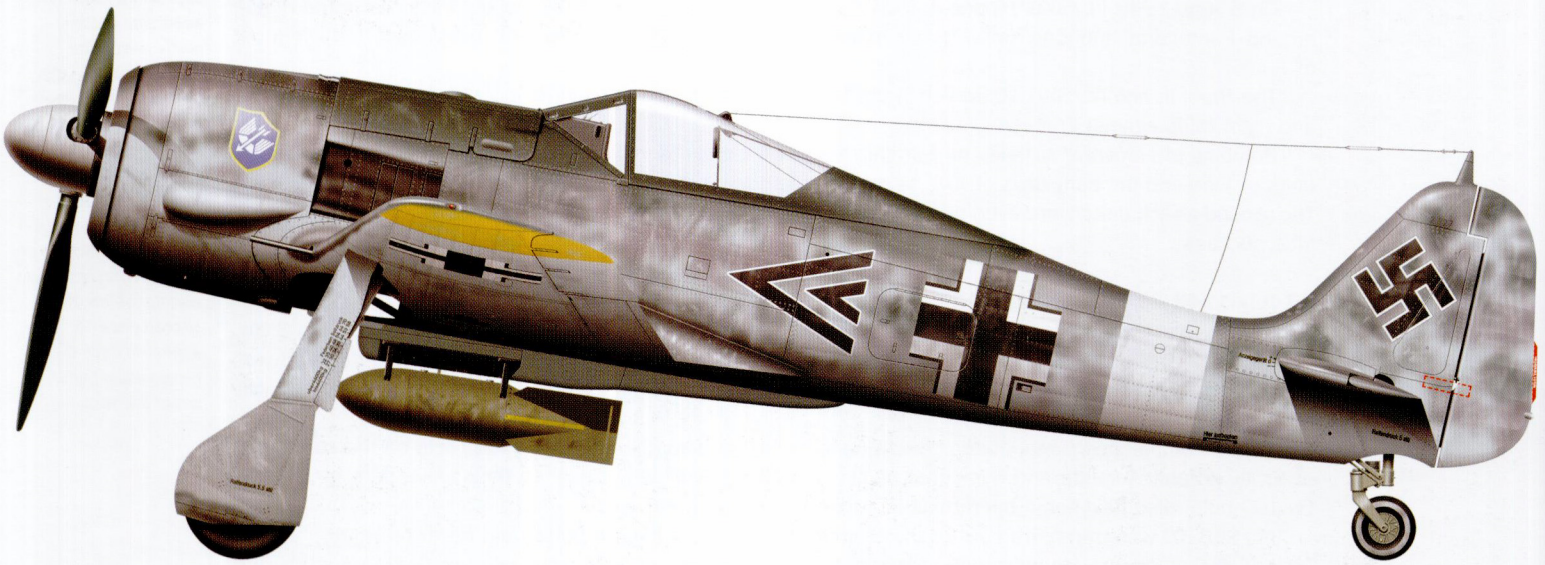
I./Sch.G 2 left the Mediterranean towards the end of August 1943, and moved to Graz in Austria. The *Gruppe* later served on the Eastern Front.

17 August 1943 – 8 September 1943

After the fall of Sicily on 16 August 1943 there was a lull for a week, before ground-attack operations against Sicilian harbours recommenced, as a result of an order from Kesselring to try to disrupt the build-up of the

Badge of III./SKG 10. The winged arrow on the shield is based on the design featured in the centre of several versions of the Frontflugspange.

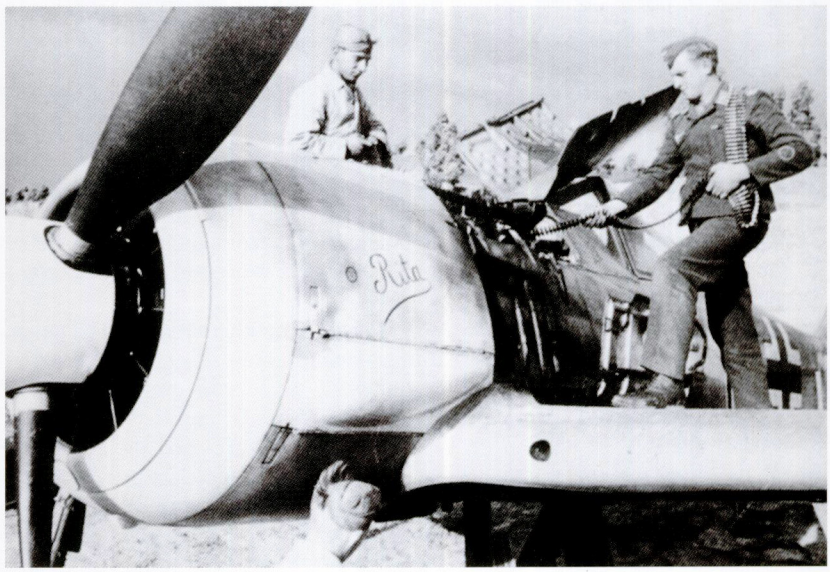
Fw 190 A-4 of III./SKG 10 photographed as it taxies out for a sortie. Barely visible on the fuselage is what appears to be part of a Stab marking, possibly the double chevron of the Kommandeur, indicating that this aircraft was allocated to Oblt. Fritz Schröter, seen (left) at the Gruppe's battle headquarters at Bizerta. Schröter, who had earlier led 10.(Jabo)/JG 2, received his Ritterkreuz in September 1942, mainly on account of his successful daylight Jabo attacks against Southern England.



Focke-Wulf Fw 190 A-5, W.Nr. 0142, 'Black <<', III./SKG 10
This Fw 190 wears a typical European scheme finished in RLM 74 and RLM 75 with RLM 76 below with the exception of a white theatre band to the rear fuselage and RLM Yellow 02 beneath the cowling and wing tips, denoting service in North Africa.

'Yellow 4', an Fw 190 A-4 of III./SKG 10 which crash-landed in early 1943. Although not yet confirmed, it is possible that this aircraft is W.Nr. 2317 which was being flown by Fw. Ludwig Seif of 11./SKG 10 on 2 February 1943 when it was hit by anti-aircraft fire and crash-landed near Ferryville. German records state that W.Nr. 2317 was 40 per cent damaged which would seem to correspond with the photograph.

Below: With a member of the ground staff seated on the wing to guide the pilot, this Fw 190 A-4 of 9./SKG 10 coded 'White 5' was photographed as it taxied past the airfield's French-built hangars at Bizerta/Sidi Ahmed in January 1943. The demands made on III./SKG 10 at this time varied greatly and involved attacks against shipping as well as ground-attack missions. As the European grey camouflage colours were more suitable for flights over the sea, it is believed that this aircraft therefore retained its 74/75/76 colouring and Fw 190s in Tunisia may have continued to do so even when the situation later demanded that most missions were carried out in direct support of ground troops. At the beginning of 1943, the Fw 190 was still able to hold its own and the enemy, who chiefly used Spitfires, treated it with a certain respect. The Gruppe therefore carried out many ground-attack operations with good results but was also sometimes employed in the pure fighter role when it helped to defend targets against bomber attacks, and at least seven pilots each claimed a Spitfire in Tunisia.



Armourers working on an Fw 190 A-4 which has had the name 'Rita' painted on the engine cowling. This aircraft is believed to have been coded 'Black 1' and although the unit to which it belonged is not known, the lack of a bomb rack would suggest II./JG 2 rather than a ground-attack unit. Of interest is the overall pale appearance of the engine area which is much more lightly mottled than the fuselage. The pale vertical line apparently aft of the fuselage cross is the undercarriage position indicator projecting from the uppersurface of the wing. This aircraft clearly has a yellow panel on the underside of the cowling but does not appear to have a white band on the rear fuselage.

This Hs 129 B-2 from 8.(Pz)/Sch.G 2 is being towed to a maintenance area for a change of air filters. Despite its appearance in the photograph the basic finish was, in fact, an overall green oversprayed with a sand colour which was particularly dense.

Allied invasion fleet. II. and III./SKG 10 took part in these raids, sometimes alongside Do 217 units.

At the end of August 1943 the first Fw 190 G-3s arrived in the Mediterranean, and were assigned to II. and III./SKG 10.

On 3 September Allied forces landed at Reggio in southern Italy, and began a slow advance north. II. and III./SKG 10 both flew missions against this landing.

9 September 1943 – 15 October 1943

The Allied landings at Salerno on 9 September 1943 provided the Fw 190 ground-attack units with a multitude of new targets, and for several weeks they were kept very busy indeed. Daily Fw 190 ground-attack operations were flown to the Salerno bridgehead, generally escorted by JG 77. Opposition from fighters and ground defences was heavy, but the Fw 190 pilots claimed some good success despite this.

While SKG 10 was busy at Salerno, II./Sch.G 2 took part in the campaign on Corsica, flying missions against various targets, including shipping, harbours, regular and irregular troops, anti-tank guns, and Corsican villages. The *Gruppe* was evacuated from Corsica to Italy at the end of September 1943.

15 October 1943 – 21 January 1944

The winter of 1943/1944 was a bad one in Italy, and severely restricted flying operations by the *Luftwaffe* ground-attack units in the Mediterranean. However, missions were flown as often as was possible.

In the middle of October 1943 the Fw 190 ground-attack units in the Mediterranean were re-designated as follows:

Re-designations

Stab Sch.G 2	became	*Stab* SG 4
II./Sch.G 2	became	I./SG 4
II./SKG 10	became	II./SG 4
III./SKG 10	became	III./SG 4

III./SG 4 left the Mediterranean for France in November 1943.

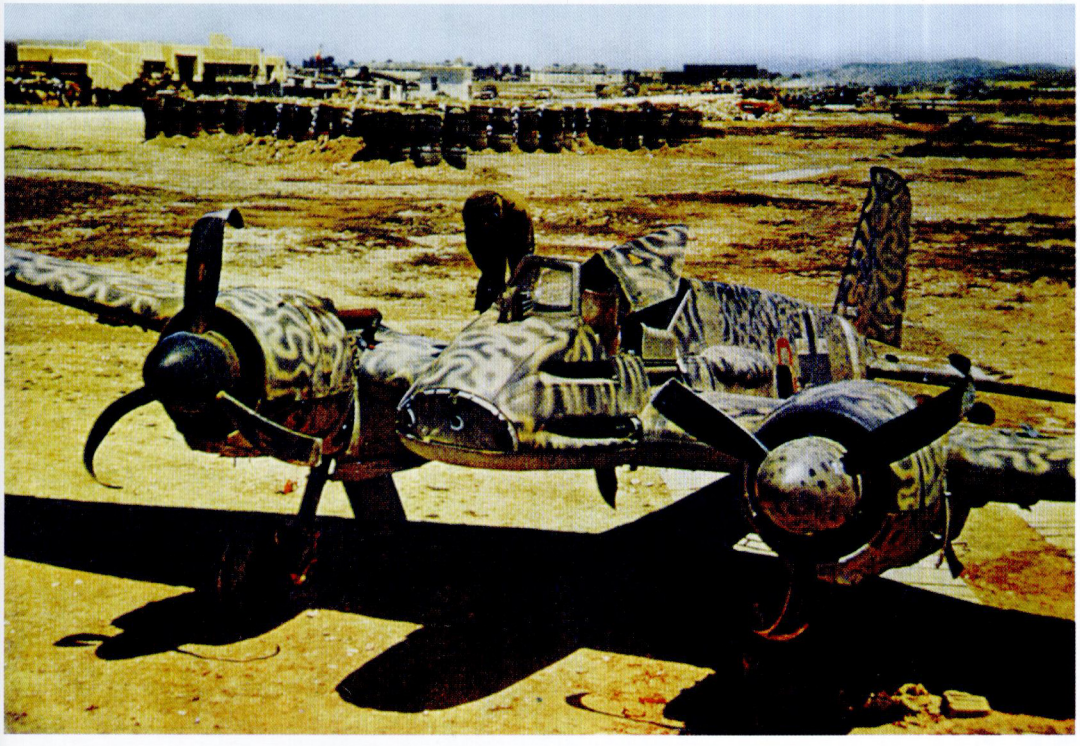
In the middle of October 1943 the weather turned bad in Italy, and as a result the ground-attack Fw 190s flew less often than had become the norm. For example, from 17 to 22 October no Fw 190 ground-attack missions were flown.

In early November SG 4 was briefly able to fly more operations in support of the German army. However, in mid-November the bad weather returned. Throughout December Fw 190 operations were again sporadic due to the weather, although on some days when the weather improved more than 60 sorties were flown.

In January missions continued to be flown to the Cassino front as often as the weather allowed. Then, on 22 January 1944 the Allies landed at Anzio, and once more the Fw 190 units had plentiful targets.

Henschel Hs 129 'Blue O' of 4.(Pz)/Sch. G 2. The white chevron on the fuselage and the metal pennant attached to the radio mast are thought to indicate that this aircraft - later captured by the British at Castel Benito - was the machine assigned to the Staffelkapitän, Oblt. Bruno Meyer.

Hs 129 B-2 in North Africa, this machine showing that desert camouflage was simply achieved by spraying the aircraft a sand colour but leaving patches of the original standard green to show through.



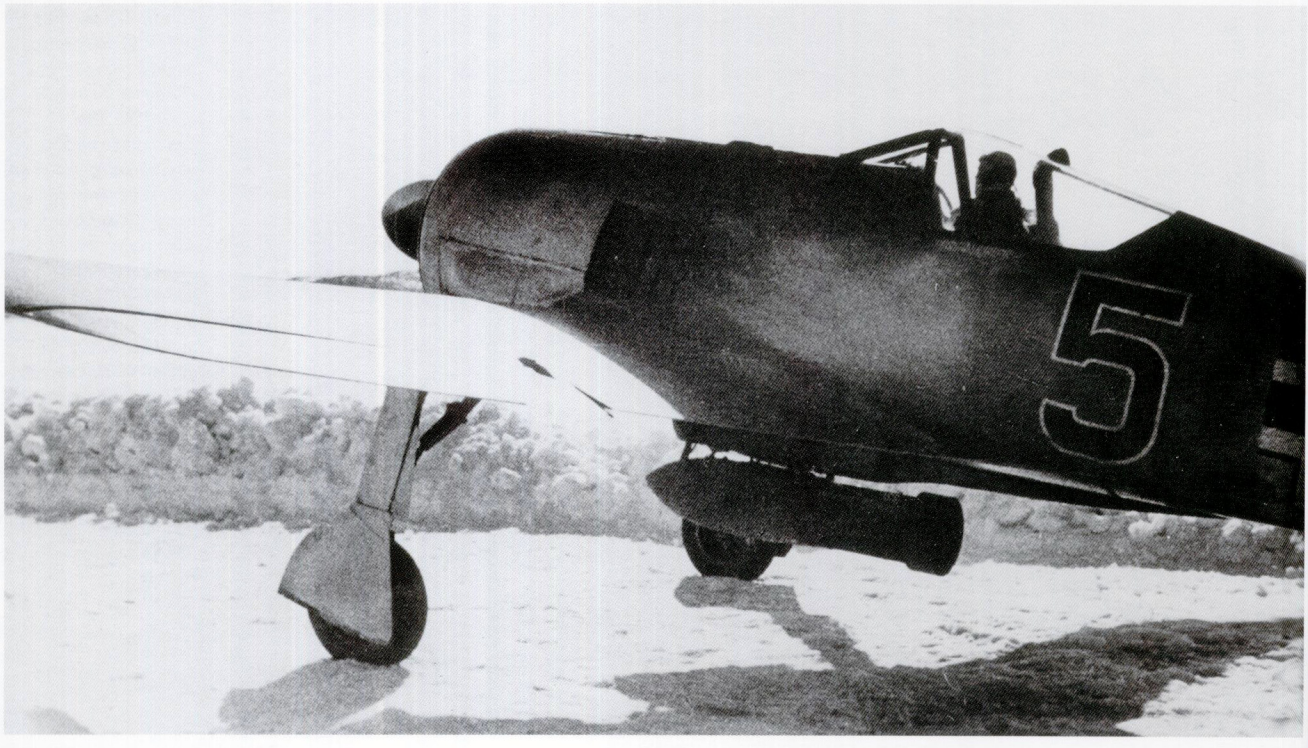
This Hs 129 B-2 'Red C' of 8.(Pz)/Sch.G 2 was found by the British at El Aounia, Tunisia in early 1943. The camouflage on this aircraft consisted of an almost continuous wavy line sprayed in a sand colour over the standard splinter pattern RLM 70/71 green, with the under surfaces in RLM 65 light blue. The aircraft had evidently suffered a wheels-up landing with the engines still turning, but had since been raised and then had the undercarriage lowered.

The Jabostaffel JG 5 in the Far North 1943-1944 *A Photo Gallery*

Badge of 14.(Jabo)/JG 5

The fighter-bomber *Staffel* 14.(*Jabo*)/JG 5 was created on 15 January 1943 by redesignating 11./JG 5. The *Staffel* operated from Petsamo in Finland, and although only in existence for about a year, succeeded in sinking a considerable tonnage of Soviet and Allied shipping as well as carrying out a number of attacks against Soviet airfields and other ground targets, with such good overall results that on 19 August 1943, the *Staffelkapitän, Hptm.* Friedrich-Wilhelm Strakeljahn, was awarded the *Ritterkreuz.*

Ground personnel watch as Hptm. Friedrich-Wilhelm Strakeljahn, the Staffelkapitän of 14.(Jabo)/JG 5, taxies his Fw 190 A-3 'Black 5' at Petsamo in Finland in May 1943. Just visible on the engine cowling is the Staffel emblem. The stripe on the rear section of the bombs in the foreground was part of a system of colour coding which indicated the type of explosive filling used.

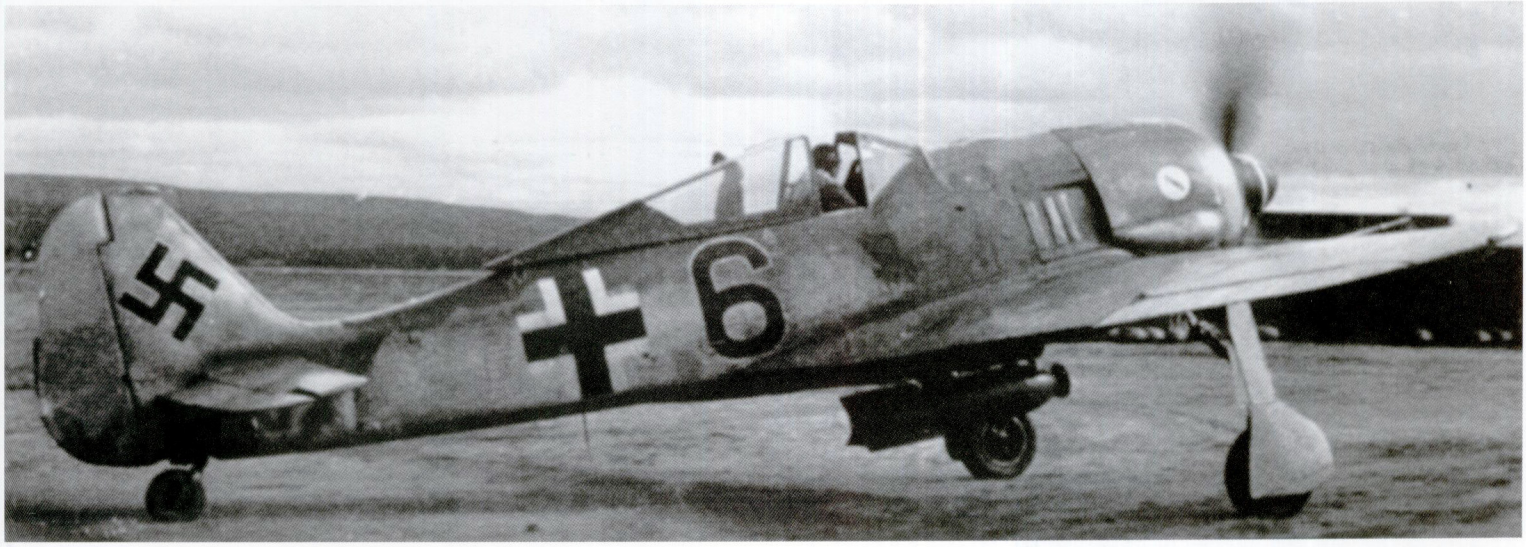


Hptm. Strakeljahn flew more than one aircraft coded 'Black 5'. This is another of his A-3s, probably photographed in November 1943.

Pilots of 14.(Jabo)/JG 5 walk away cheerfully from their aircraft following another mission over the Far North in the summer of 1943. From right: Uffz. Rudolf Gerdnt, Uffz. Otto Quander, Oblt. Karl Koch, Uffz. Kohl, and Staffelkapitän, Hptm. Friedrich-Wilhelm Strakeljahn who was awarded the Ritterkreuz on 19 August 1943.

Fw. Albert Wittmann returning from a sortie which was 14.(Jabo)/JG 5's 1,000th mission. During the course of these missions, the unit accounted for over 35,000 BRT of Soviet and other Allied shipping. Here, with one of the unit's machines suitably adorned for the occasion, Uffz. Wittmann and fellow pilots enjoy a celebratory drink.

(From top) Fw. Stefan Türk, Fw. Albert Wittmann and Fw. Richard Luy of 14.(J)/JG 5 take a break between operations at Petsamo in the autumn of 1943. The three pilots pose on top of an unfused 500 kg bomb marked with the inscription 'Guten Appetit!'.



The oversize 'Black 6' on the fuselage of this Fw 190 A-3 of 14.(Jabo)/JG 5 taxiing with an SC 250 bomb is typical of this Staffel's aircraft. Note that, as frequently observed on older models of the Fw 190 retained in service, this aircraft has been modified with the later pattern exhausts as fitted to the A-5. The circular plate on the front of the bomb was intended to ensure that the blast effect was maximised by detonating the bomb above ground.

Armourers of 14.(Jabo)/JG 5 loading an SC 250 bomb beneath 'Black 9', an Fw 190 fighter-bomber at Petsamo, Finland in late 1943. The SC series of bombs were used where a purely blast effect was required and had thin-walled casings so that they could be filled with the maximum explosive content. During 1942 and 1943, it was thought that, at the most, four or six aircraft could be employed against a single target and that the attack should be carried out in pairs. The reason for this was that if any more aircraft were employed together they would disturb each other in the air. Later, when increased Soviet anti-aircraft defences were encountered, the Fw 190 fighter-bomber units of the Schlachtflieger found the best results were achieved by exactly the opposite tactics and, adopting the methods previously employed by the Ju 87 units, preferred to make a concentrated massed attack which split the enemy's defences and had the greatest effect on enemy morale.

For most of its existence 14.(J)/JG 5 was equipped with the older Fw 190 A-2s and A-3s, but from April 1944 (by which time the unit had been re-designated 4./SG 5), it began to take delivery of the first F-3s, such as 'White M' seen here with a carefully applied coat of temporary white camouflage in a splinter pattern over the normal European scheme.

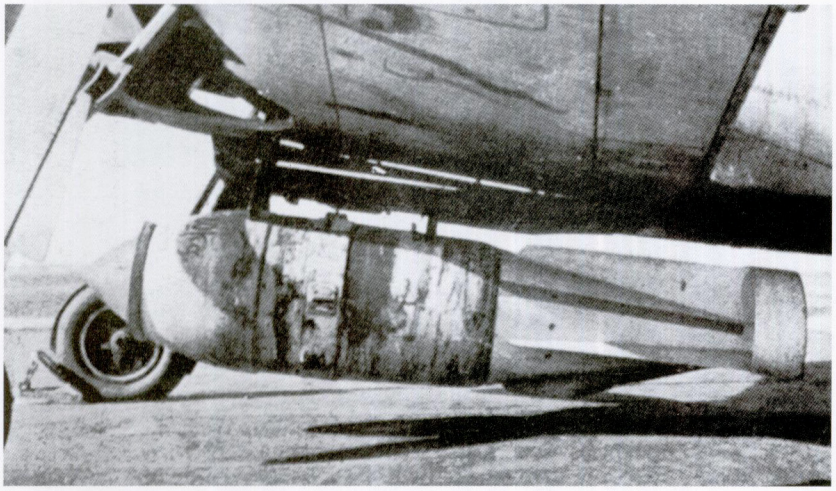
Focke-Wulf Fw 190 F-3 'White M' of 4./JG 5, [formally 14.(Jabo)/JG 5], Finland, 1944
This machine was finished in a standard European 74/75/76 scheme with the camouflage extending down the fuselage to a point approximately equivalent to the aircraft's horizontal axis, although this was slightly higher in the area aft of the fuselage cross. Interestingly, the standard scheme has been over-painted with some effort in a carefully executed white splinter pattern. It covers all horizontal flying surfaces and extends to the lower fuselage aft of the exhaust ducts. Only the upper part of the cowling has received the treatment. The spinner tip is white.

Sonderstaffel Einhorn and III./KG 200: September 1944–May 1945

by Nick Beale

Sonderstaffel Einhorn (Special Force "Unicorn") was the idea of a former glider pilot, *Oblt.* Karl-Heinz Lange, who dreamed of attacking expected Allied invasion fleets with a manned glide-bomb, the pilots accepting death in a *Totaleinsatz* (total commitment) or *Selbstopfer* 'self-sacrifice'. No such weapon existed and so in April 1944 KG 200's Technical Officer suggested attacking ships with an Fw 190 carrying a 2,500 kg bomb right on to its target. By mid-June however it was decided to train the pilots on the Fw 190 with an 1,100 kg bomb. Progress was slow, the moment for a strike on the landing fleets passed and during July, *Fhj.-Uffz.* Kurt Klietz, assigned to II./KG 200, wrote home that he was in Großenbrode/Travemünde making practice attacks with the Fw 190 against target ships. On 29 August, IX. *Fliegerkorps* signalled that once trained, *Einhorn* was to become a ground-attack unit with "the heaviest load", flying during the evening twilight against targets within a 150 km radius of jumping-off base at Le Culot, Belgium. In September however, *Einhorn* was at Achmer with just seven Fw 190s (five serviceable).

After American troops took the road and rail bridges across the River Waal at Nijmegen, Holland on 20 September, the Germans made repeated efforts to destroy them by air, land and water. On the night of 27/28 September, III./KG 51 had sent 42 aircraft against bridges and roads leading into the city, and early next morning, *Einhorn* was thrown into the fight as well. *Luftflotte* 3's situation report for 28 September records that seven Fw 190s of KG 200 attacked, scoring a direct hit on the road bridge and another on the railway bridge for the loss of one aircraft and Leutnant Herbert Leschanz of *Einhorn* was duly posted missing (Fw 190 F-8, W.Nr. 581600, A3+MA). The raiders had run into Spitfire Mk. IXBs of No. 411 Squadron RCAF, several of whose pilots made claims, including F/O M.G. Graham (Blue 4):



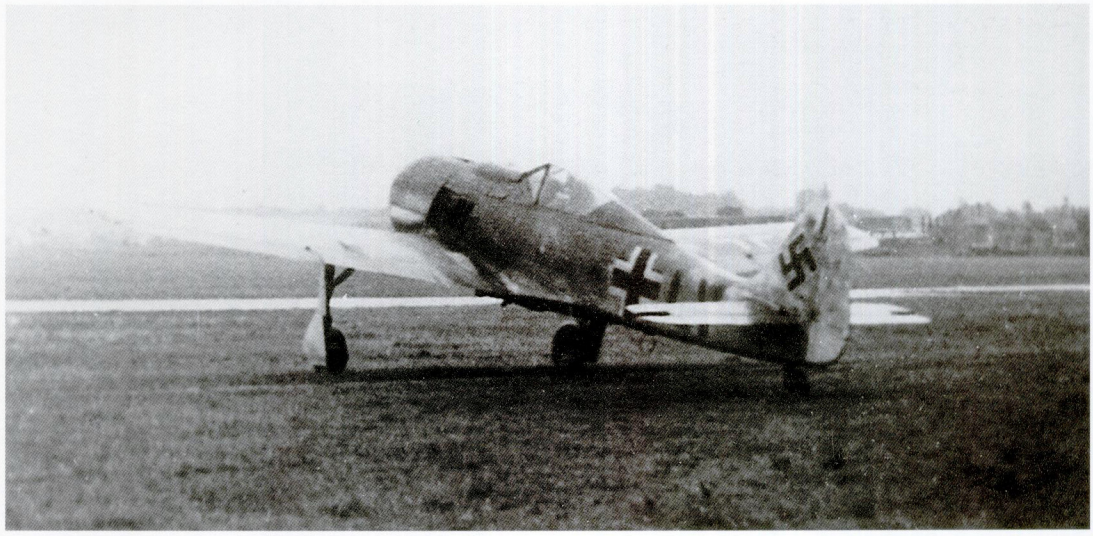
A close-up of an SC 1000 (1000 kg - 2205 lbs) fitted to an Fw 190, on which, because of its size, the lower fin has been cut down in order to give the necessary ground clearance for take-off.

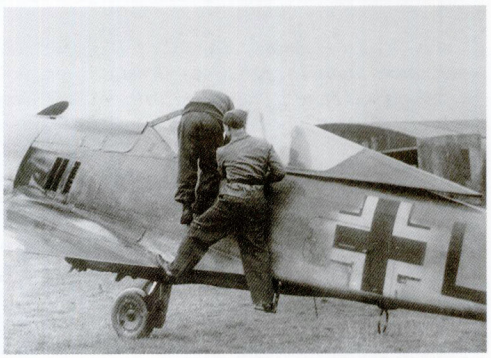
"...over Nijmegen 8 plus Fw 190 were sighted approaching from S.E. at approximately 12–14,000 feet. We climbed into them [and I] positioned myself approximately 1,500 yards behind one Fw 190 diving on bridge and closed to approximately 700 yards flying through Allied flak. Fw 190 dropped bomb near bridge and did a climbing turn to starboard into cloud. I followed and caught him coming up through top of cloud. Fired from line astern at 500–700 yards ... F/Lt. Portz ... confirmed it as hitting ground and burning."

On 5 October, an HQ in Verona noted that *Einhorn* was "due to transfer to Northern Italy in the near future with 14 Fw 190s (ground-attack aircraft with the heaviest bombs)..." A move to Italy had been planned back in early September but the unit only arrived at Villafranca on 19 October. The pilots were promptly detached to Ghedi for ten days' instruction in night and instrument flying under EGON ground control and the Intelligence Officer at *Luftwaffe* HQ in Italy reported that it was "*especially noteworthy that this Staffel has been converted to night operations in quick time.*" While the authorities in Italy dismissed missions against ships as impractical since no fighter escort was available, higher commands in Germany still listed *Einhorn* as an anti-shipping unit.

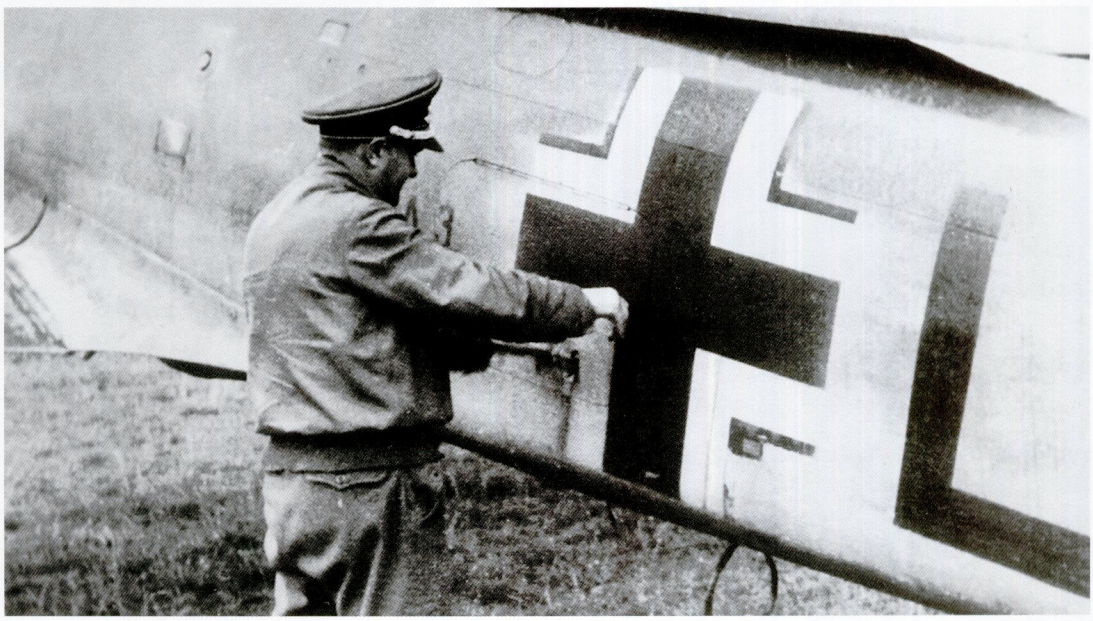
On 18 November, 85 B-24s carpeted Villafranca with 7–8,000 fragmentation bombs, costing *Einhorn* one Fw 190 burnt out and another five damaged by splinters. Ten days later, the unit put up five sorties against Allied targets in Forli, while on 2 December *Einhorn* struck again, bombing and strafing the Advanced HQ of Desert Air Force and the road and bridge at Ronco. Late on the afternoon of 10 December, Cesena was attacked by Fw 190s with 1,000 kg bombs: one fell near an officers' mess, causing no damage; the other hit the Signal Office at Eighth Army's HQ, knocking out practically all line and radio communications and it was an hour before contact with the Army's three Corps was re-established. In all these attacks the Allies heard guidance being passed from ground controllers, including the signal to release bombs. Six *Einhorn* aircraft left Villafranca on 17 December for Holzkirchen in Germany, one suffering 80 per cent damage during take-off. The wreck of one of the *Sonderstaffel's* aircraft (Fw 190 F-8/R1, W.Nr. 581447, A3+LX) was found when Villafranca was captured in April 1945.

At Holzkirchen on 18 December, *Einhorn* was ordered to restore its technical serviceability urgently and transfer to Bonn-Hangelar for a "special operation" (dropping of heaviest calibre bombs). The move took place on the 23rd and the *Staffel* was attached to NSG 20, itself equipped with around 40 Fw 190 G-3 and F-8s, while *Einhorn* had only five unserviceable Focke-Wulfs and 16 men. Although the unit's serviceability at Hangelar never rose above three, *Einhorn* pilots were soon in action and one was reported shot down at Eupen on 31 December.

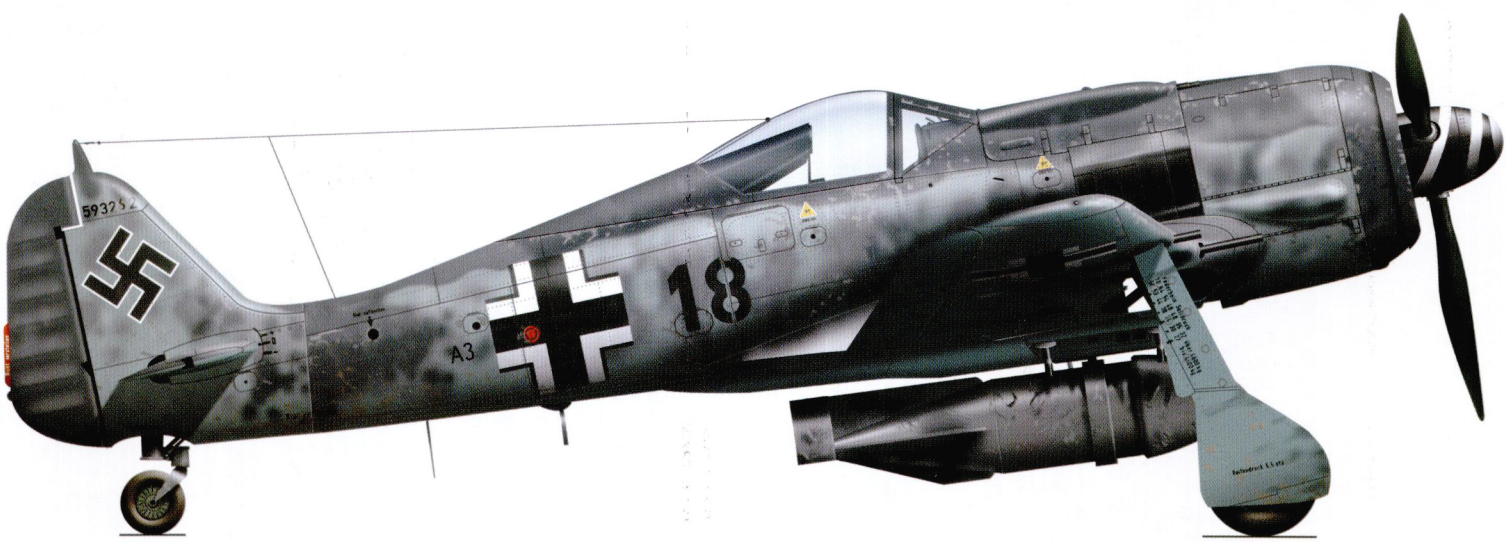




Four photographs of an Fw 190 F-8/R1 of KG 200's Sonderverband Einhorn, coded A3+LV, seen as it returns from a mission having disposed of a SC 1000 bomb. Members of the ground crew help the pilot out of the cockpit. Having exited the aircraft, the pilot is seen opening the fuselage hatch to the storage compartment.



This Fw 190 F-8 of 11./KG 200, W.Nr. 583262, has suffered a fire in its engine compartment as well as other damage. It carries the code A3+18, stencilled in black and was found at Rhein-Main where the Staffel had been detached in March 1945 for operations against the American bridgehead at Remagen.



Focke-Wulf Fw 190 A-8, W.Nr. 583262 of 11./KG 200 found at Rhein-Main, March 1945

This Fw 190 was found abandoned after an engine fire on Rhein-Main airfield where the Staffel had been detached. It carries the code A3+18, stencilled in black on the fuselage sides. Its fuselage crosses are of the 'full' type, rare by 1945, while those underwing and the Hakenkreuz are solid black with a white outline. The 'A3' code of KG 200 seems absent from the port fuselage side while the individual number '18' is repeated in black on the port wheel cover. This machine is painted in the late war colour greys on the uppersurfaces and 76 on the undersides with grey mottle being applied to the fuselage sides.

In October 1944, Sonderstaffel Einhorn was transferred to Italy and flew three operations from Villafranca di Verona during late November and early December before returning to Germany. Here, the fuselage and wings of an Einhorn Fw 190 F-8/R1, W.Nr. 581447, A3+LX lie in Villafranca's scrapyard. Darker paint has been added to the fuselage top and sides since the national and unit markings were applied, possibly to improve the camouflage effect for night flying.

Toward the end of November 1944, I./SG 5 had moved to Berlin-Staaken for training in night flying and its Staffeln were renamed 9., 10. and 11./KG 200. The 9. and 10./KG 200 were deployed to Stavanger in Norway with 15–18 aircraft. Carrying the new anti-ship *Bombentorpedo*, they were intended to take part in *Unternehmen Drachenhöhle* (Operation Dragon's Cave) an attack on the Royal Navy's anchorage at Scapa Flow in the Orkney Islands and then redeploy for anti-shipping attacks in the Scheldt Estuary. These two *Staffeln* and the *Gruppenstab* continued their training in Norway and Denmark, suffering accidental losses in February and March while 11./KG 200 joined *Einhorn* for night-attack operations on the Western Front.

The *Kapitän* of 11./KG 200 was *Hptm.* Erwin-Peter Diekwisch, holder of the *Ritterkreuz,* and the Staffelführer was *Ltn.* Bachner. On about 20 January the *Staffel's* pilots went by rail to the small landing ground of Kirtorf to collect new Fw 190 F-8s and by early February they were in Twente where *Einhorn's* pilots were absorbed as reinforcements. In its turn, 11./KG 200 was subordinated to NSG 20 on 23 February 1945 for operations against Allied transport columns, road junctions, troop concentrations and armour.

In March, 9 aircraft from 11./KG 200 were detached to Rhein-Main for missions against the American bridgehead at Remagen, carrying 1,000 kg bombs on at least four occasions and 500 kg weapons on their other sorties. Shortly afterward the *Staffel* flew against US Third Army's breakthrough at Bad Kreuznach. The remainder of the *Gruppe* was still at Stavanger on 23 February but had left Norway by 30 March. The records are incomplete but it seems that 11./KG 200 was pulled out of the line at the end of the month and reunited with the rest of the *Gruppe*. The whole unit operated from early April on ground-attack missions in Central/North Germany with one *Staffel* apparently specialising in daylight sorties. On 6 April, III./KG 200 was in action against the British Army's bridgehead over the River Elbe at Stolzenau, with the 10. *Staffel* reporting three of its Fw 190 F-8s and their pilots lost to AA fire. The British 8 Corps recorded:

"... what must have been the enemy's greatest and best planned air effort for some time ... at least 30 or 40, including Fw 190s, Ju 87 and 88s and jet aircraft, were in action during the day. Their object, to destroy the bridge, was unfortunately achieved, since a bomb caused serious damage to it this afternoon."

On the evening of the 17th, 19 Fw 190s of III./KG 200 bombed and shot up vehicle columns in the Uelzen-Gifhorn-Celle area, losing one of their number. The *Gruppe's* base at this period was Lübeck-Blankensee, before it retreated to Eggebek near the Danish border. The *Kommandeur, Major* Helmut Viedebannt was killed on a supply-dropping mission to Berlin on the night of 30 April–1 May. On 2–3 May, III./KG 200 was grounded for lack of fuel but during the next night 14. *Fliegerdivision* was able to put up 30 night ground-attack aircraft to strafe and bomb road transport columns in the area of Bad Segeberg, Oldesloe and Lüneburg. A Western Front ceasefire took effect on the morning of 5 May and in the first days of peace, *Luftflotte Reich* helped the Allies locate and disband its units, listing III./KG 200 at Eggebek on 6 May 1945 with 31 Fw 190s and 446 personnel (60 of them aircrew). *Hptm.* Diekwisch ended the war in a Hamburg hospital.

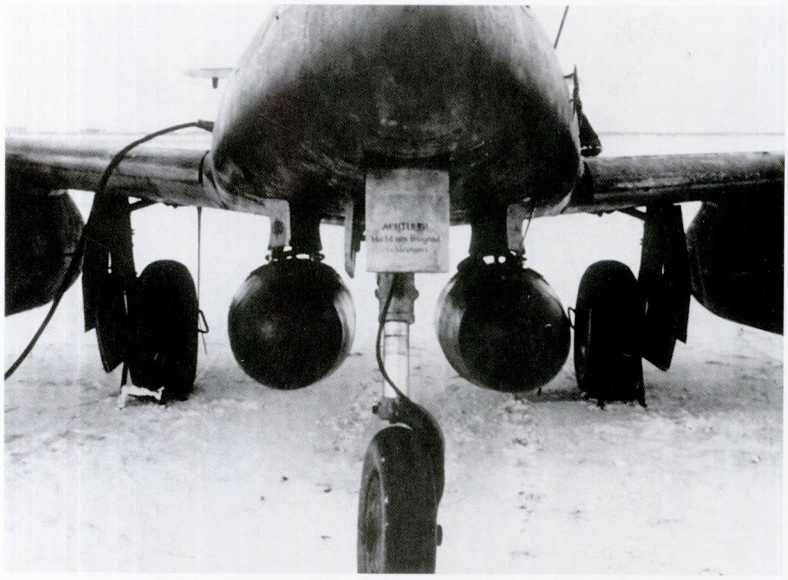
Kommando Schenck and KG 51

by J. Richard Smith

Obstlt. Wolfgang Schenck was born on 7 February 1913 at Windhoek in what is now Namibia. He entered the Luftwaffe in 1936 and served first with I./JG 132 and I./ZG 1. He became a Staffelkapitän of Erprobungskommando 210 in September 1940 and then led 1./SKG 210 in Russia. On 1 January 1942 he took over I./ZG 1 and then had a staff position before forming Sch.G 2 in North Africa a year later. He was wounded several times during this period, before being appointed Inspector of the Schlachtflieger later in 1943.

Although the revolutionary jet propelled Me 262 had been designed purely as a fighter, a *Führer Befehl* (order) had been issued as early as 4 March 1943 stating that every fighter must henceforth be capable of operating as a fighter-bomber. Some projected fast bomber versions of the Me 262 were then developed but it was Hitler's conversation with Göring on 27 October which signalled a change of role for the aircraft.

Outlining his plan to combat the anticipated Allied invasion of France, he said: *"The jet fighter with bombs will be vital, because at the given moment it will scream at top speed along the beaches and hurl its bombs into the massive build-up that is bound to be there."* Historians will forever debate the wisdom of Hitler's thinking, but it resulted in the development of a bomber version of the Me 262, and the establishment of a specialised *Kommando* under the veteran *Schlachtflieger, Major* Wolfgang Schenck.



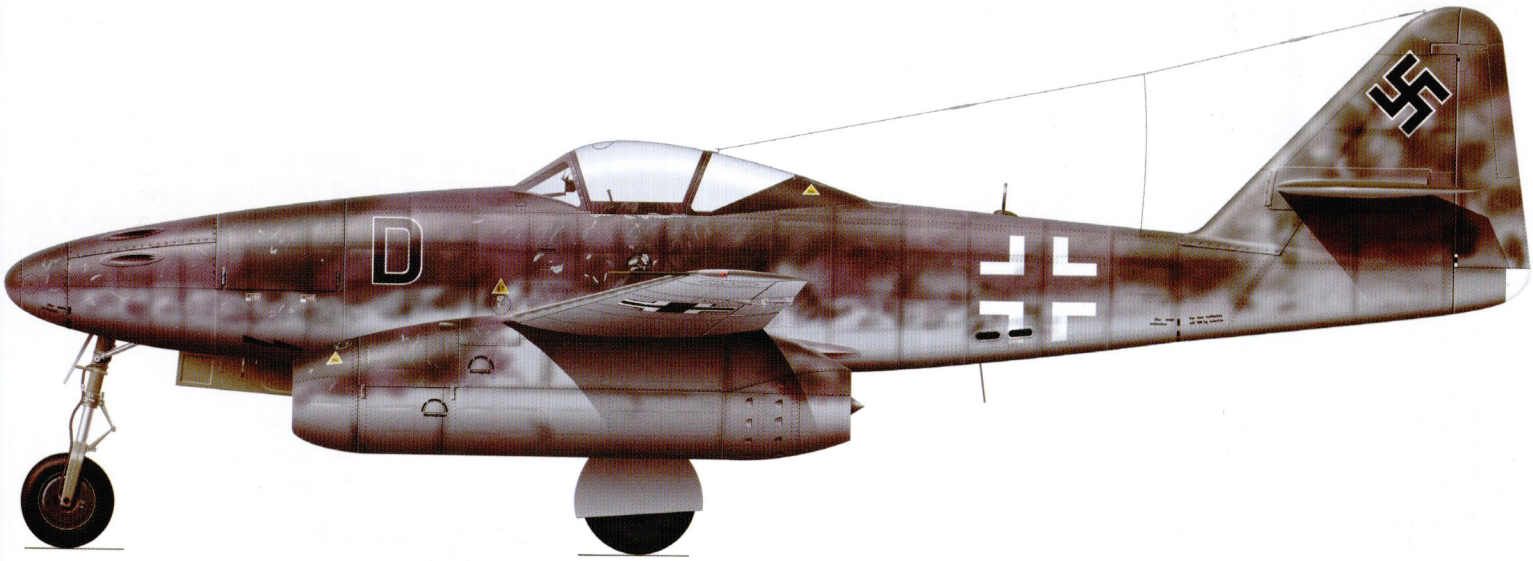
The tenth prototype Me 262 V10, W.Nr. 130005, was used to test various bomb loads and drop tanks. This photograph shows the aircraft carrying two experimental wooden drop tanks, but these leaked profusely and were abandoned. The ETC 503 racks beneath the fuselage could also be used to carry a maximum load of two 500 kg bombs. The legend on the nosewheel doors reads: 'ACHTUNG - Nicht am Bugrad schleppen' ('WARNING - Do not tow by the nosewheel').

Schenck had previously commanded Sch.G 2 in the Mediterranean before being appointed Inspector of the *Schlachtflieger* in December 1943. On 20 June 1944, already two weeks after the Allied invasion of France, he established an experimental Me 262 bomber unit at Lechfeld. Nine Me 262s were lost during a US bombing raid, but nevertheless about six aircraft of *Kommando Schenck* were finally able to move to Chateaudun in France on 20 July. Many problems were experienced, not least the need for structural strengthening and the provision of a suitable bombsight. In addition, Hitler had ordered that the aircraft should not operate below 4,000 m (13,000 ft) in case one fell into Allied hands. *Luftflotte 3* asked for this order to be rescinded on 5 September, but their plea was rejected and the *Kommando* was limited to scattering SD 10 anti-personnel bombs from AB 250 or 500 containers with little chance of causing major damage. Initial operations with these were directed against Allied troops attempting to seize the Arnhem Bridge, attacking Dutch and Belgian towns and striking at British crossings over the Albert Canal at Beeringen.

Due to the rapid Allied advance, which forced successive moves to Etaples, Creil, Juvincourt, Chievres and Volkel, the *Kommando* finally became established at Rheine in September. By this time it had been absorbed into 3./KG 51 with the intention that the whole of the first *Gruppe* of the *Edelweiss Geschwader,*

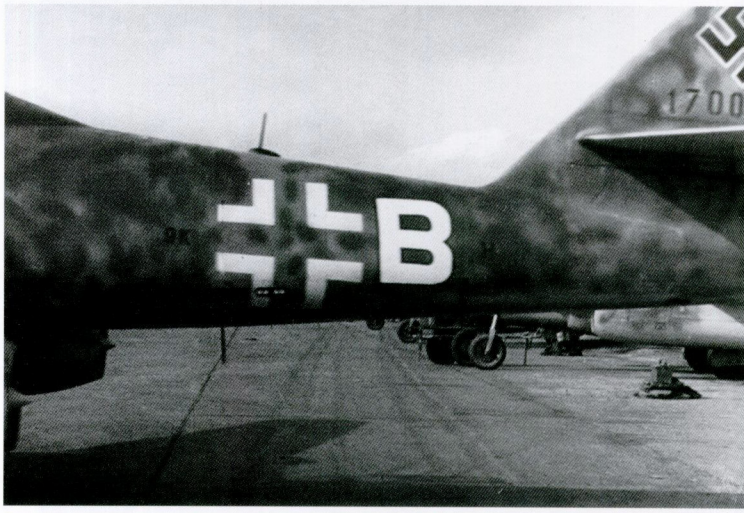
One of the first Me 262s delivered to Kommando Schenck at Lechfeld was W.Nr. 130179. This aircraft, 'Black F' was tested by Lt. Batel of I./KG 51 who complained about the quality of its construction. The aircraft may also have been flown by Major Wolfgang Schenk. The machine was completely destroyed by fire at Lechfeld on 19 July in an American bombing attack.

This Leipheim built Me 262, coded 'Black D', W.Nr. 170063, undergoing undercarriage retraction tests with Schenck's Kommando early in July 1944. Shortly afterwards it was transferred to the experimental centre at Rechlin-Lärz where it was coded 'White 9'. It may have been captured by Russian forces at Kolberg in April 1945 and test-flown by Andrei Kochetkov before finally crashing on 17 September 1946.

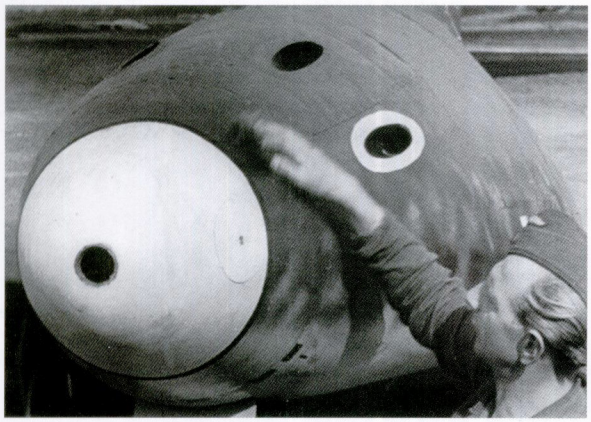


Me 262 A-1a 'Black D' Kommando Schenck, Rheine, September 1944
The Me 262s of the first jet bomber unit, Kommando Schenck, carried black letters outlined in white on the fuselage noses. Camouflage was dark grey (74) and medium grey (75) on the uppersurfaces with pale blue grey (76) underneath.

A Kettenkrad tracked motorcycle tows an Me 262 A-2a coded 9K+BH, W.Nr. 170096 of 1./KG 51 (below) from its dispersal. The picture was probably taken at Lechfeld or Leipheim where the Gruppe began working up because it is unlikely that the aircraft would be so neatly lined up on an operational airfield.



Right: The nose of 9K+BH, showing that it only had two MK 108 cannon but the two spare ports were not faired over. Those in use were, however, edged in white paint.



KG 51, should re-equip. In spite of its high speed, a few Me 262s were shot down by flak and Allied fighters, the type proving vulnerable while taking off and landing. On 5 October RAF Typhoons bombed the runway at Rheine, leaving several craters. A week later the *Kommando* attempted to take revenge when an Me 262 dropped two 250 kg bombs on Grave airfield, killing five airmen and destroying one Spitfire and damaging another nine. For the first time the unit operated under the control of the *Benito* ground station at Rheinberg.

I./KG 51, which was led by *Major* Hans Unrau and distributed equally between Rheine, Hörstel and Hopsten, reported a strength of 31 aircraft, with 26 serviceable on 20 October. Schenck continued to advise the unit on operational tactics, eventually taking over as *Geschwader Kommodore* on 5 December. A change of emphasis came on 7 November when *Luftwaffenkommando West* ordered I./KG 51 to concentrate on bombing occupied towns and villages designated by Army Group B rather than attacking airfields.

Also in November, II./KG 51 under *Major* Herbert Vetter began to exchange its Me 410s for Me 262s at Schwäbisch Hall and Hesepe. On the 13th heavy casualties to I./KG 51 at Rheine and 5./KG 51 at Hesepe were caused by Allied carpet bombing. A few losses to Allied fighters and to accidents occurred in November and, by the end of the month I./KG 51 reported a strength of 48 aircraft and 46 crews and II./KG 51, which was still undergoing training, 36 aircraft and 53 pilots.

On 16 December the German army launched *"Wacht am Rhein"*, a plan to use 200,000 newly reorganised troops to strike at 80,000 unprepared Americans, driving a wedge between them and the British in the Ardennes, and capturing the strategically important port of Antwerp. To assist in this, a small operational group of six Me 262s from II./KG 51 under *Major* Wilhelm Gundermann was ordered to transfer by road to Hesepe and Achmer. The main job of the Me 262 was to harass vehicles and tie down Allied fighters. This task was made easier on 21 December when the height restriction imposed on the jets was

An Me 262 A-2a fighter-bomber photographed just after delivery to 1./KG 51. Coded 9K+YH, the aircraft had sprayed "scribble" pattern camouflage with white fuselage nose tone, fin and rudder tip and individual letter. This aircraft has only two gun ports for its MK 108 cannon, but others, while carrying a similar armament, still had all four ports visible.

finally revoked, allowing them to operate at low level with more hope of success.

A pilot from KG 51 was later to report: *"The maximum diving angle of the Me 262 with bombs was 35 degrees. We dived down from 4,000 m to 1,000 m but never much lower. Care was taken to prevent air speed exceeding 920 km/h since the Me 262 was red-lined at 950 km/h. Care was also taken to empty the rear tank before the dive. This was necessary because the release of bombs with a full rear tank caused the nose of the aircraft to pitch up very suddenly, either knocking out the pilot or throwing the machine into an uncontrollable spin. Our pilots used the old* Revi *bombsight which was supposedly accurate to within 35 to 40 m. Following release of our bombs, the Me 262s returned home at between 1,000 and 1,200 m with a distance of 60 to 90 m between aircraft."*

Some of the pilots of I./KG 51 look on anxiously as a trainee pilot makes his first operational take off in an Me 262. From left to right are: Lt. Wilhelm Batel, Lt. Heinrich Haefner, Lt. Oswald Ritter von Rittershiem, Hptm. Rudolf Abrahamczik, Hptm. Rudolf Roesch and Lt. Maser.

During *Unternehmen Bodenplatte* on 1 January 1945, a strike by 21 Me 262s from I./KG 51, by far the largest so far mounted by the unit, preceded the successful main attack by conventional fighters against Eindhoven. Seven days later I./KG 51 reported a complement of 32 aircraft and 29 pilots, almost full strength. On 1 February Schenck was appointed *Inspizient für Strahlflugzeug* being replaced as *Kommodore* of KG 51 by *Obstlt.* Rudolf von Halensleben. In the following few weeks KG 51 was engaged mainly in attacking Allied troops as they advanced on the Rhine. On 8 February, for example, 20 Me 262s from I./KG 51, part of which had moved to Giebelstadt, attacked enemy troops in the Colmar-Mühlhausen area, reporting 18 aircraft over target. This operation was described by *Oblt.* Heinrich Haefner of 2./KG 51: *"I took off for a mission to Colmar in company with* Hptm. *Abrahamczik. After releasing our bombs we took the opportunity to attack three bomber formations during our return. Some 20 enemy fighters were providing cover. As before, we fired a few bursts at them, and many jettisoned their underwing tanks. We then made off quickly for Giebelstadt."*

On 19 February some 30 Me 262s from KG 51 attacked American troop concentrations in the Inden, Aldenoven and Geilenkirchen areas, losing one aircraft. Six days later a similar number of Me 262 sorties were flown in the Linnich, Duren and Julich areas, backed by sweeps with 125 piston-engined fighters. *Luftwaffenkommando West* reported the loss of three jet bombers.

Remagen

Following the Allied capture of the Remagen railway bridge over the Rhine on 7 March jet bombers, initially Ar 234s from KG 76, joined by Me 262s from I./KG 51 on the 12th, became heavily engaged in attempting to destroy it and the parallel pontoon crossings which the Americans were constructing. The bridge finally collapsed on 17 March but the next day, four Me 262s from II./KG 51 under Egon radio control, dropped six AB 250s and an AB 500 on the pontoon bridges through cloud from high altitude. Two days later von

A pair of Me 262s of I./KG 51 at Rheine being prepared for an operation against Allied ground troops during the winter of 1944/45.

In the autumn of 1944, Fritz Wendel, the Messerschmitt test pilot, visited the headquarters of KG 51 at Rheine to assess bombing operations using the Me 262. Wendel is seen here in discussion with Major Heinz Unrau, Kommandeur I./KG 51.

Me 262 of 1./KG 51 sits on the rain-slick runway at Hopsten, late 1944. Just visible in the photograph is the white nose of the 1.Staffel and what appear to be ETC 503 bomb racks under the fuselage.

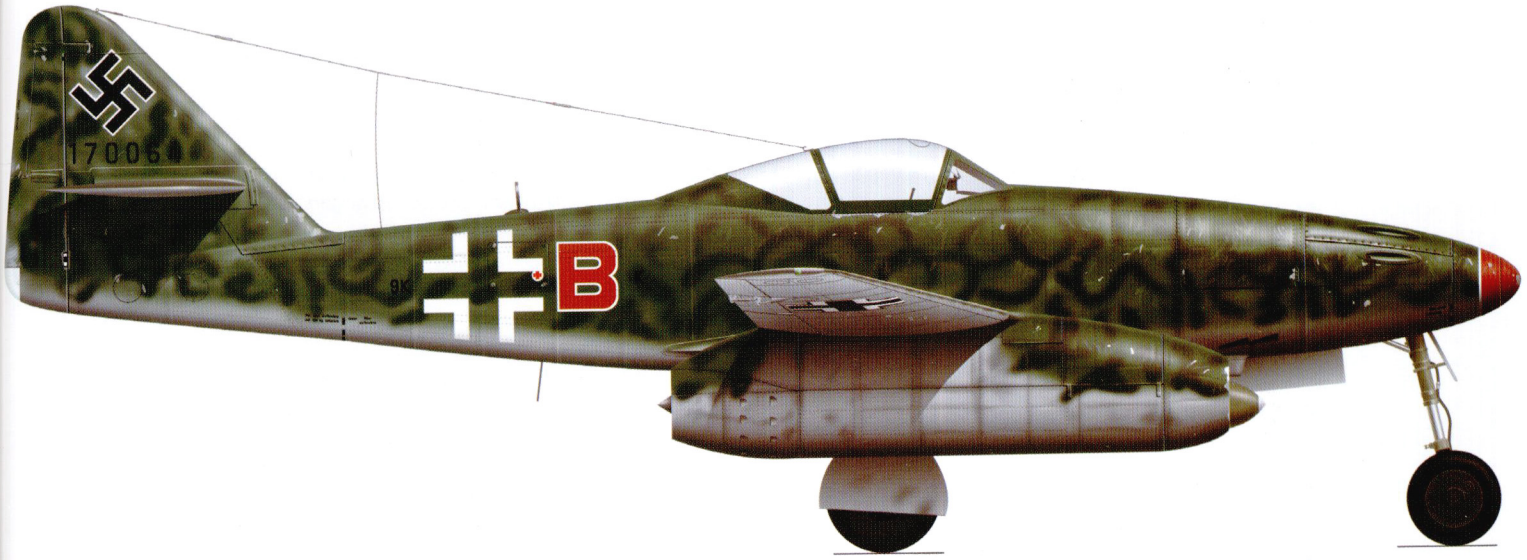
Hallensleben was killed on the ground during a series of concentrated American bombing attacks. He was replaced by *Obstlt.* Siegfried Barth.

On 21 March 27 Me 262s from KG 51 flew four separate ground attack sorties against Allied troops breaking through in the Kreuznach-Grünstadt area. Sixteen 250 kg bombs and 26 AB 250 containers carrying SD 10 bombs were dropped. Targets included vehicles, transport columns and concentrations of parked vehicles. Next day 18 jets attacked targets in the same area. Bad weather, together with a gradual return to its original role as a fighter, restricted Me 262 operations until the last day of March. Then 15 aircraft from I./KG 51 and others from II./KG 51 hit American troops crossing the River Main by way of a temporary bridge at Hanau dropping AB 250 and AB 500 weapons containers.

On 6 April 1945 KG 51 was ordered to transfer from *Luftflotten Kommando West* to *Luftflotte Reich* where it was to be disbanded. At this time I./KG 51, now at Leipheim, had 19 Me 262s available while II./KG 51 had none. Many aircraft from both units had been handed over to fighter or reconnaissance units and several had gone missing. The order for disbandment seems to have been ignored, however, because on 10 April, KG 51 was able to fly 23 Me 262 sorties against road movements between Königshofen and Bamberg. Haefner recalled: *"Our aircraft were hidden in the forest to the left and right of the* Autobahn. *American fighters were constantly over our airfield and Marauder units carpeted the field with bombs. At 1106 hrs, I took off from the* Autobahn *for a mission to Crailsheim. The aircraft was pulled on to the* Autobahn *with a* Kettenkradv. *Then the turbines were started and we headed off on an easterly course. The landing took place from the west in order that we could be quickly hidden again in the forest. I was elated not to have become easy prey for enemy fighters on landing."*

Operations against Allied troops continued to be flown during April, Me 262s strafing Reusch Herrenbergheim on the 11th, and dropping bombs on motor transport and a fuel dump near Bruchsal near Pforzheim on the 14th. Next day KG 51 bombed targets between Bamberg and Erlangen. On 22 April I./KG 51 flew fighter-bomber sorties against the bridgeheads at Dillingen on the River Danube but a large part of II./KG 51 was captured at Strasskirchen by tanks of the US Seventh Army. Finally, on the 30th, the remaining eight Me 262s from I./KG 51 landed at Prague-Rusin where they took part in the last desperate defence of their base against the uprising by Czech partisans. At best the attempt to use the Me 262 as a ground-attack aircraft had proved ineffectual, at worst, it was a disaster.

Me 262 A-2a, 'Red B' '9K+BK' of 2./KG 51 is towed out of its camouflaged shelter at Rheine, late 1944. At this time, KG 51's aircraft were flying intensive missions against Allied troops and strongpoints in north-west Germany, Holland and Belgium.



Me 262 A-2a, '9K+BK', 2./KG 51 'Edelweiss', Rheine, October 1944

Carrying the 'scribble' pattern of the greens (81 and 82) with pale blue grey (76) beneath, this Me 262 of 2./KG 51 had the same camouflage pattern as the aircraft of the 1. Staffel. Part of the unit code, '9K+ K', was painted in small black characters, with the individual letter 'B' and the tip of the fuselage nose painted in red, thinly edged in white. Although exact records are lacking, this may have been the aircraft, W.Nr. 170120, in which Uffz. Horst Sanio was shot down and killed by British flak on 30 November 1944.

Badge of SG 4

SG 4 in Italy and France: September 1943–July 1944

by Nick Beale

After Sicily fell, the Fw 190 ground-attack force attacked shipping, although not very effectively according to the Allies. On 3 September 1943 the British came ashore at Reggio di Calabria and the *Luftwaffe* responded with an estimated 40 fighter-bomber sorties against the landing area but the scale of effort fell by half next day, "remaining negligible" thereafter.

Salerno

At the Salerno landings on 8 September "the GAF's initial reaction... was immediate and vigorous" with 60 fighter-bomber sorties that day. For the rest of the month the response was small except during the German counter-attack of the 12th and 13th and only on the 11th were Fw 190s sent against the advancing Eighth Army near Potenza. The *Luftwaffe* concentrated on naval vessels, transports and landing craft rather than the forces already ashore. In the Allies' assessment:

"The force employed was never sufficiently strong to do more than harass the landing operations, but it achieved some success and it is believed that the Germans were satisfied that they had proved effective."

The Germans also made intensive use of Bf 109s in *Staffel* strength carrying 21 cm mortars in an anti-shipping role, the first time this had been seen. After the forces from the Calabria and Salerno landings had joined up, the *Schlachtflieger* continued to resist their slow progress up the Italian peninsula.

In the reorganisation of ground-attack units on October 1943, the Fw 190 units in Italy were formed into a new *Schlachtgeschwader*:

Stab/Sch.G 2	became	*Stab*/SG 4
II./Sch.G 2	became	I./SG 4
II./SKG 10	became	II./SG 4
III./SKG 10	became	III./SG 4

The new II. *Gruppe* lost four Fw 190 Gs when its base at Guidonia was bombed on 24 October but three weeks later, SG 4 responded in kind when about 20 of its Fw 190s (escorted by two dozen Bf 109s) attacked Naples-Pomigliano d'Arco airfield with AB 500 canisters, claiming 80 Allied machines destroyed or damaged. Nevertheless, German limitations were apparent on 16 January when *Luftlotte* 2 reported that "by exerting all forces to the utmost" it had managed three ground-attack operations in support of 5. *Gebirgs Division*, attacking vehicle traffic and concentrations around Valle Rotondi. The first mission had consisted of 13 Fw 190s, the second of 11 and the third of 10 machines.

During November, III./SG 4 left Italy to refit at Clastres in France. In February 1944, the *Gruppe's* pilots were used to ferry Fw 190s to the other two *Gruppen* in Italy and at least one officer was detached to them for six weeks' operational experience. The unit began receiving Fw 190 A-6 and A-5/U8 models during March and A-7s the following month. *Staffeln* were rotated to Toulouse for anti-submarine and reconnaissance patrols off the Riviera.

Anzio

When the invaders landed on 22 January 1944 there was no *Luftwaffe* reaction for six hours and (in the words of their targets) "even thereafter the immediate daylight reaction was mediocre" although it was allowed that the Germans were frequently grounded by the January weather. On the 23rd, SG 4 put up three missions totalling about 35 sorties, attacking landing vessels and strafing troop concentrations but *Luftflotte* 2's tactical HQ reported that all the aircraft had been damaged by the strong AA defences. Next day, two operations against the landing fleet were hampered by bad weather and the escorts were driven off by Allied fighters; on the 25th only nine Fw 190s attacked the fleet. That evening the *Luftflotte* ordered "employment of mortar aircraft to the greatest possible extent against the Nettuno beachhead."

The two SG 4 *Gruppen* supported successive German counter-attacks on the beachhead: on land their targets were troop and vehicle assemblies, artillery positions and supply dumps as well as unloading operations in Nettuno harbour, objectives behind rather than on the front line. According to the Allies, their efforts against shipping "proved singularly ineffective." Their greatest impact was on 24 January with a hospital ship sunk and two damaged, otherwise up to 15 February they burnt out one landing craft and damaged two more.

A US transport column in the Cassino area after an attack by SG 4. Halfway down the road, medical personnel are attending to casualties, while another target burns in the distance.

Rockets vs. Landing Craft

Appreciation of 14th [February 1944] by *Staffelkapitän* of III./JG 53 "... approach flight was made in *Schwarm* formation at 5,000 m. Both mortars were released simultaneously at 2,000 m. in a 45 degree dive. Speed of the aircraft at time of release reached 550–600 kph. Target was aimed at with 2 degrees of elevation on the sights. In all attacks the hits were always very accurately placed around, and some of them right in the centre of, the landing craft aimed at. After both mortars had been released the aircraft received very powerful and sudden upward jerk and therefore it is advisable to dive at no more than 600 kph, otherwise wings could not stand powerful upward thrust. Also advisable to release both mortars simultaneously as if only one released the aircraft is brought out of the direction of aim and certainty of accurate hit cannot be guaranteed. During attacks, cases occurred of individual aircraft releasing only one mortar. With a one-sided load a pilot cannot engage in air combat and on contacting the enemy must jettison mortar tubes with the help of jettisoning fittings. Under local conditions the aircraft requires at least three hours for re-alignment and re-arming."

From the landings through into May, ground-attack efforts had to be divided between Anzio-Nettuno and the Cassino battles, although the latter seem to have been a lower priority, perhaps because the German Army was in a stronger defensive position there. Losses on any given day rarely exceeded one or two but they kept on occurring (in April 1944, I./SG 4 lost six machines to enemy action and the II. *Gruppe* lost 25) necessitating constant infusions of new aircraft and pilots. For their part, the men of SG 4 claimed several Allied fighters shot down but not all of these can be substantiated from surviving records. Although given strong escorts by the *Jagdflieger*, the Fw 190s were liable to interception at any stage of an operation between take-off and landing. On 20 April, SG 4 took off at 1100 hours, rendezvoused with its escort and carried out an attack on vehicle concentrations near Lanciano. After the mission, which seems to have been without loss, 15 of I./SG 4's Focke-Wulfs touched down at Rieti but 12 Kittyhawks of No. 250 (Sudan) Squadron were on armed reconnaissance in the area:

"When over Rieti airdrome 15 Fw 190s... were observed in the Western, Eastern and Southern dispersals. Bombs were dropped North of the drome and in the Western dispersal and then all aircraft strafed. In all, 11 enemy aircraft were set on fire, two of them blowing up."

Actually, they had done even better than that as Rieti's ground staff described:

"At 12.20 about 20 fighter bombers attacked the airfield, the attack lasting 30 minutes... with bombs [and] guns. Four fragmentation bombs were dropped but without causing any damage. The aircraft were set on fire by gunfire, because no defence was available. 13 machines burned out; 3 were lightly and 1 severely damaged."

Periodically the *Gruppen* were taken out of the line, returning to their rear base of Piacenza to rest and refit, the final such interlude lasting from 4–13 May. Then I. and II./SG 4 returned to the front,

Fw 190 F-8s of 1./SG 4 awaiting refuelling. The bulged cowling ahead of the cockpit indicates that these aircraft are fitted with 13 mm fuselage weapons. The two MG 151 cannon in the wing roots of the ground-attack versions were retained but the outboard cannon were not installed.

It is believed that the above photograph and the photographs on the opposite page right, were taken either in the Turin area of north-west Italy after I. and II. Gruppen had been withdrawn from operations in order to replace its losses and re-equip with new Fw 190 F-8s.

sustaining heavy casualties including two *Staffelkapitäne,* a *Gruppenkommandeur* and the *Geshwaderkommodore* killed.

With the Allied breakthroughs at the end of May, the two *Gruppen* were withdrawn to airfields in north-west Italy and spent June rebuilding and absorbing substantial deliveries of new aircraft before deploying to Latvia in the first days of July.

The Normandy invasion prompted III./SG 4's transfer to Tours and Laval but they were intercepted by American fighters and *Gruppe* suffered four pilots killed and one wounded, as well as five casualties among ground crew being carried in the Focke-Wulfs' rear compartments. Nevertheless it operated later that day, escorted by I./JG 11. Missions continued until the 10th, when bombing of its bases immobilised the *Gruppe*. On the 15th it was inspected at Laval by *Obstlt.* Druschel of the *General der Schlachtflieger*'s staff and on the 23rd swapped its Fw 190 A-6s for A-8s. In the third week of June, III./SG 4 was relocated to bases in central France for anti-partisan operations, flying five before pulling out to Lüneburg-West on 3 July. Shortly afterward, the *Gruppe* was reunited with the rest of the *Geschwader* in Latvia.

For the rest of the war in Italy the ground-attack role would fall to NSG 9 which had begun its operational career over the Anzio beachhead in March with the Fiat CR.42 before converting to the Ju 87 that Spring. For three missions in November/December it would be joined by *Sonderstaffel Einhorn* (see page 66) and was able to re-equip its 1. *Staffel* with Fw 190 F-models early in 1945. For more about this unit see *Luftwaffe Colours: Stuka Volume Two* (Classic Publications, 2006) and *Ghostbombers, The Moonlight War of NSG 9* (Classic Publications, 2001).

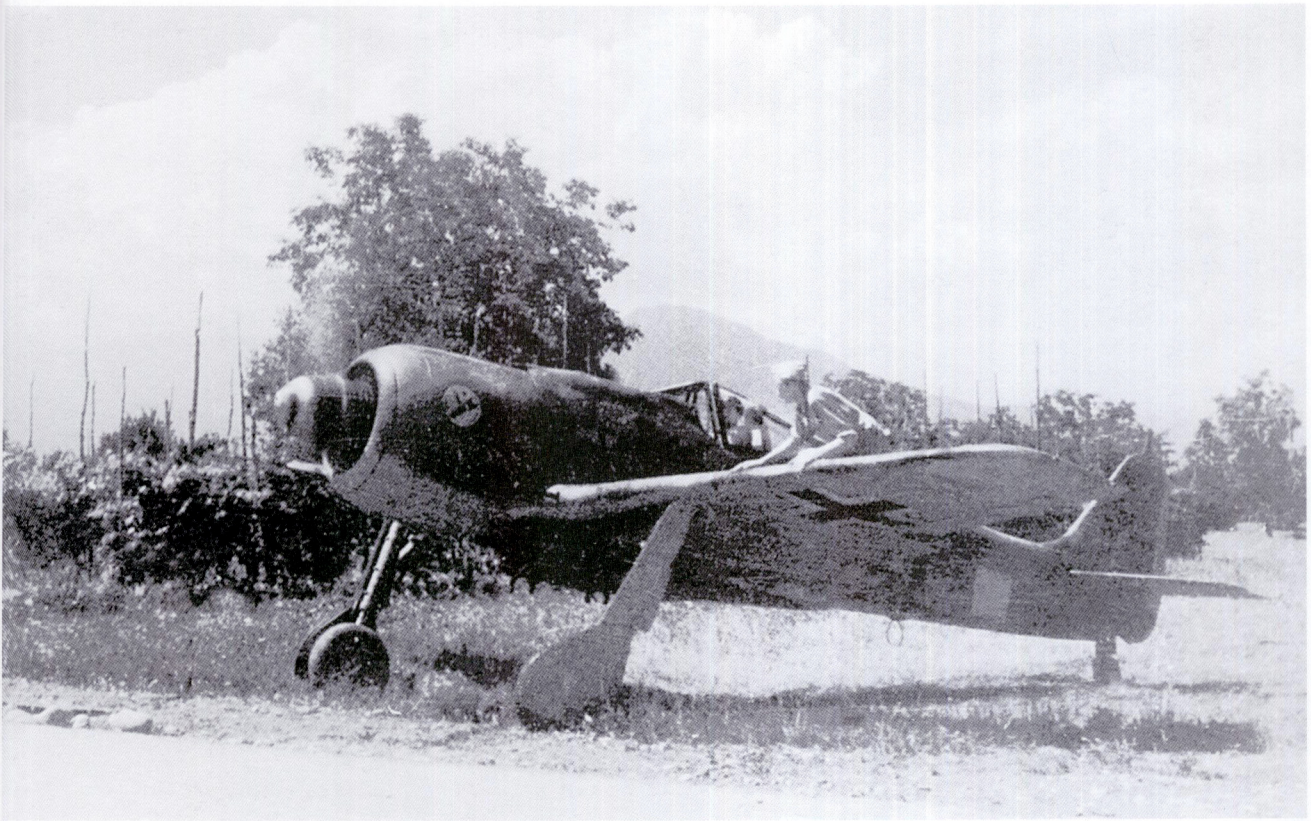
SG 4 in the West: December 1944–January 1945

From July 1944, daylight close support in the West was by day fighter units carrying bombs. After five months in the East and a spell re-equipping, the three *Gruppen* of SG 4 moved to the Western Front in December, based on airfields around Köln and Bonn. They had a new weapon, 8 cm rocket projectiles. The relatively few missions flown proved costly in pilots and aircraft and the unit's performance was so poor that the *Geschwaderkommodore*, *Obstlt.* Ewald Janssen was replaced by *Oberst* Alfred Druschel, brought back from a staff appointment. On 28 December, SG 4 was ordered to prepare an attack on Bastogne, troop assemblies and artillery positions in woodland to the north and movements on the road in from Fauvillers. Fighters and anti-aircraft were not the only hazards and that day III./SG 4 reported that one Fw 190 had struck a tree during a mission and was now in the workshop at Köln-Wahn.

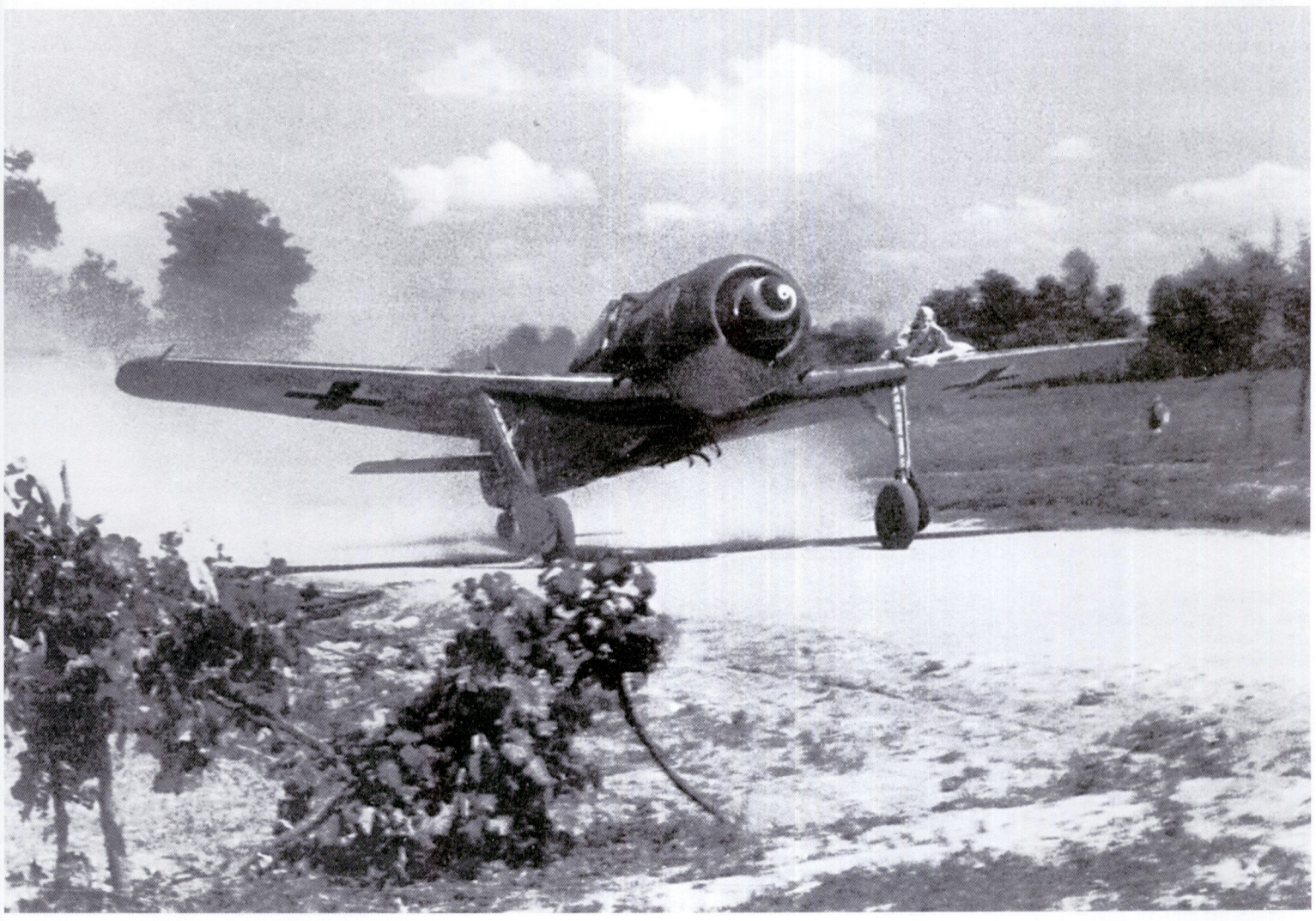
The *Geschwader* joined in the *Bodenplatte* attack on 1 January 1945. Of the 12 III. *Gruppe* aircraft that took off, only five flew the mission and according to the *Gruppe's* war diary, those who had turned back faced a court martial. The Geschwader lost four aircraft and pilots including *Oberst* Druschel. After this, SG 4 returned to the Eastern Front for the remainder of the war.

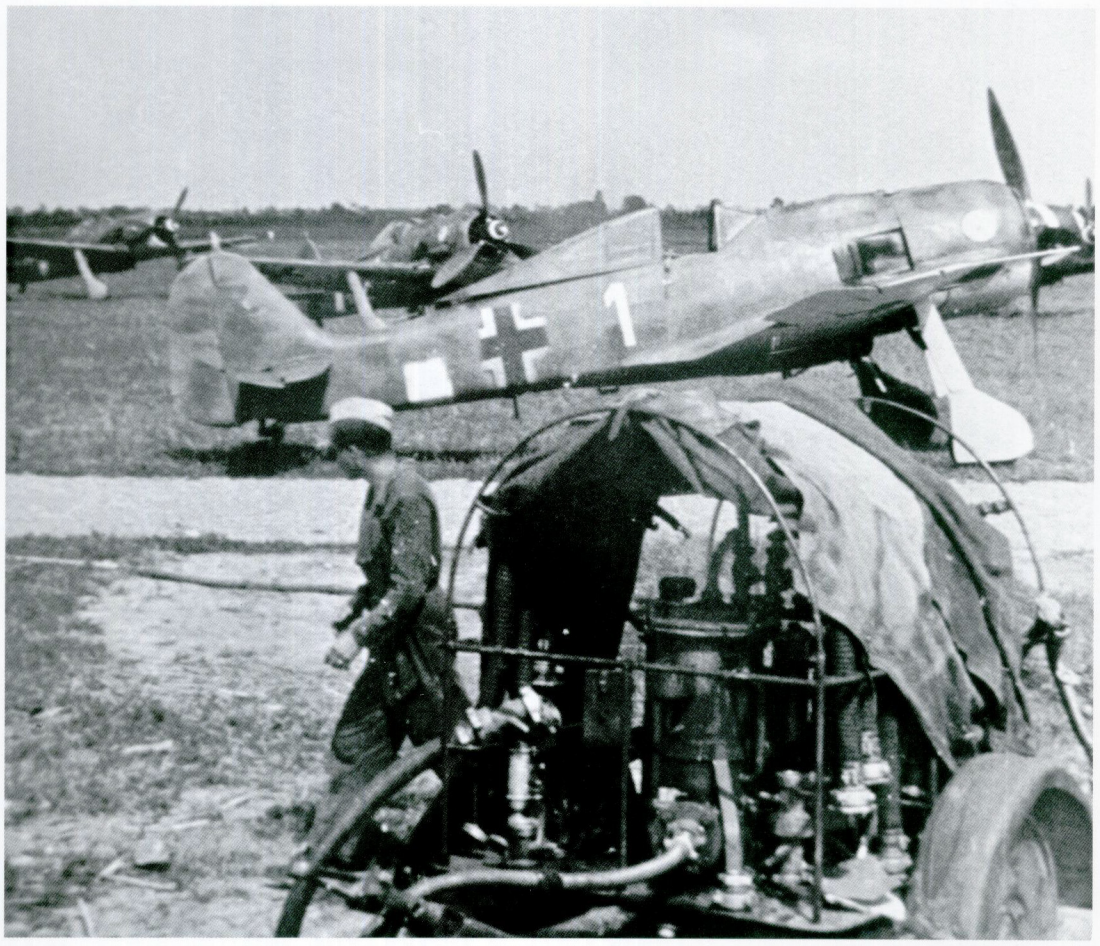
Losses of SG 4 formation leaders in Italy

Oberstlt. Wilfried Müller-Rienzburg	*Kommodore*-designate	PoW	5 December 1943
Hptm. Karl Langenburg	*Kapitän* 1./SG 4	KIA	18 March 1844
Hptm. Heinrich Zwipf	*Kommandeur* I./SG 4	KIA	7 April 1944
Hptm. Gerhard Walther	*Kommandeur* II./SG 4	KIA	18 May 1944
Oblt. Robert Reiprich	*Kapitän*, 3./SG 4	KIA	21 May 1944
Ltn. Horst Kulpa	*Kapitän*, 6/SG 4	KIA	21 May 1944
Oberstlt. Georg Dörffel	*Kommodore*	KIA	26 May 1944

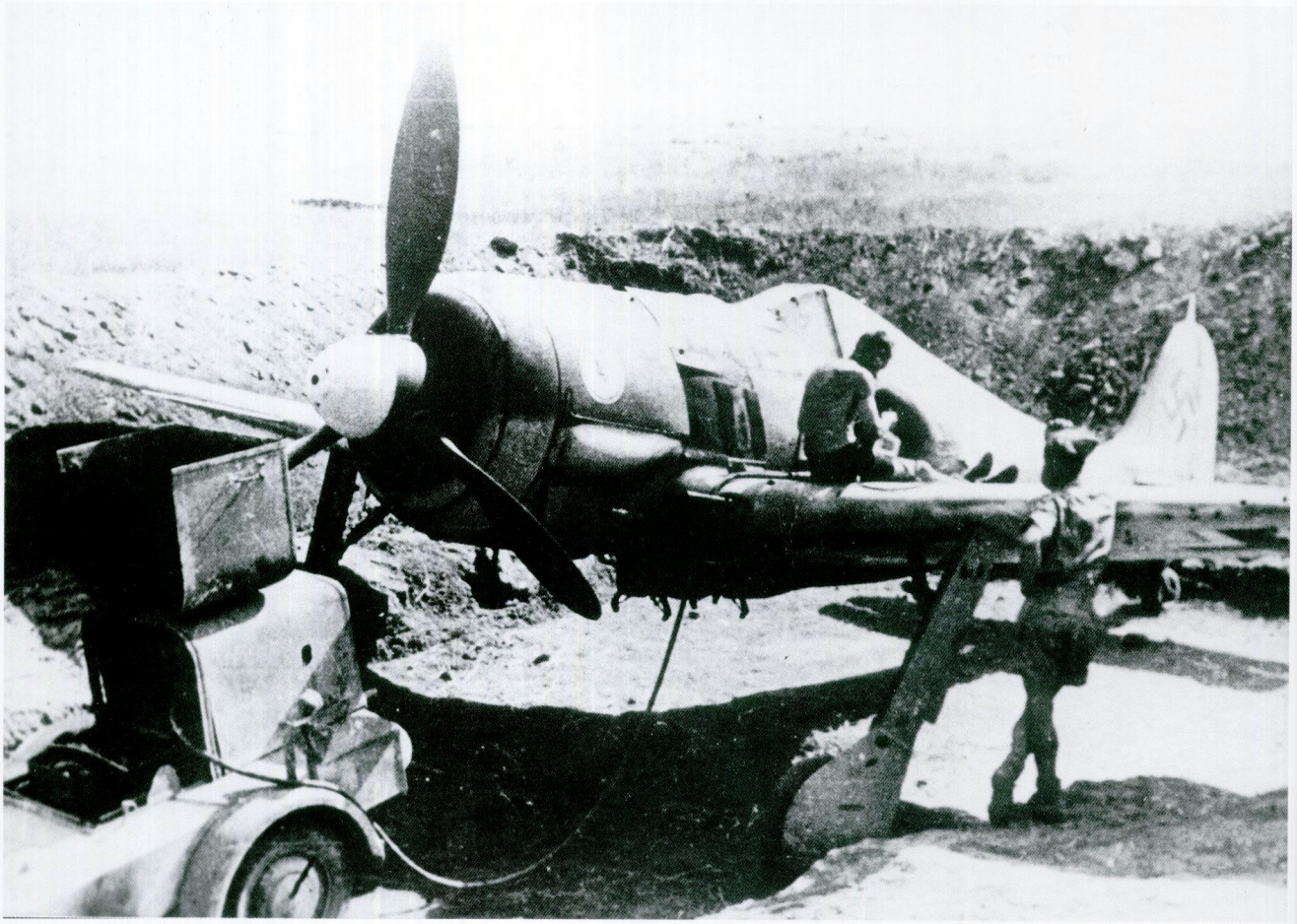


An Fw 190 emerging from its concealed dispersal and taxiing with a member of the ground staff positioned on the port wing to guide the pilot. The empty bomb rack suggests that the aircraft is either preparing for a non-operational flight or is taxiing purely for the benefit of the photographer and would tend to support the view that these photographs were taken somewhere far removed from the main battle lines.





Once again it is clear that these photographs were taken when there appeared little likelihood of attack as none of the usually meticulously observed measures adopted by SG 4 when operating close to the front in Italy are in evidence and the gravel taxiways would have revealed the presence of the airfield to any roaming Allied aircraft. This Fw 190 F-8, 'White 1', of 1./SG 4 was probably the aircraft assigned to the Staffelkapitän. As with most aircraft of I./SG 4 photographed at this time, the camouflage has been applied without masking the national insignia which, on the uppersurface of the wings and tail, have been overpainted. The overspray on the fuselage Balkenkreuz, too, shows that it was not masked off, while the aircraft number has clearly been applied after the re-camouflaging was completed.



During the spring of 1944, I./SG 4 operated the Fw 190 in a variety of versions which included a few F-3s plus the more numerous A-6 and G-3. In this interesting view of one of the unit's Fw 190 A-6s in its blast pen, note that the aircraft's spinner has a white tip rather than the spiral seen elsewhere.

NSG 1, 2 and 20 in the West: September 1944–May 1945

by Nick Beale

By Summer 1944, NSG 1 and NSG 2 had graduated from light aircraft such as the Ar 66 and Go 145 to Ju 87s. NSG 2 (minus its 2. *Staffel*) was brought west early in September to Köln-Ostheim. On the night of 11–12 September, nine of its aircraft attacked Allied movements between Liège and Verviers, Belgium. Afterward, one machine was reported missing. Over the next week, Eupen and Maastricht and the area west of Aachen were also targets but the *Gruppe* does not seem to have intervened against the Allied airborne landings in Holland until 26–27 September when 24 Ju 87s bombed Nijmegen and Eindhoven. The former town and its airfield were the target over the next several nights, NSG 2 losing several aircraft, three of them to a single 219 Squadron Mosquito crew on 2 October. On the 21st, the unit requested a rest after 11 days' uninterrupted action.

By mid-October, NSG 1 was assembling at Bönninghardt and some of its men were detached to NSG 2 to gain experience in their new environment. Targets included troop assembly areas, artillery positions, tank and transport parks, road junctions and bridges. Outbound flights were generally at around 300 m, climbing to between 1000 and 2000 m to cross the front line. Protective measures included radio silence, *Düppel* and continuous changes of course and altitude. Navigation exploited visual beacons, searchlights and starshells fired by ground troops; targets were marked with flares, and EGON guidance (based on triangulation by two ground radars) was introduced subsequently.

In mid-November, a "new" *Nachtschlachtgruppe* appeared on the western order of battle, NSG 20. This unit of around 40 Fw 190 F- and G-models was III./KG 51 renamed. Based at Bonn-Hangelar under *Maj.* Kurt Dahlmann, it would carry on exactly as before, striking at the same targets as the Ju 87s as well as making occasional sorties by day. Complementing these operations were selected night fighter crews who, since the Normandy campaign, had been intruding far behind Allied lines, strafing and bombing airfields, roads and railways.

On 10 November, the codeword AZIMUTH was issued: the three *Nachtschlachtgruppen* were to transfer to airfields around Kirrlach in support of Army Group G. They returned within a week and for the next month operated in the area west of Aachen, on the borders of Germany, Holland and Belgium but winter weather, fuel shortages and allied bombing of their bases all inhibited operations and sporadic losses to night fighters continued.

Formation leaders (Autumn/Winter 1944)

Kommandeur NSG 1	*Hptm.* Hilberg
Staffelkapitän 1./NSG 1	*Hptm.* Modrach
Staffelkapitän 2./NSG 1	*Hptm.* Winter
Staffelkapitän 3./NSG 1	*Oblt.* Werner
Kommandeur NSG 2	*Maj.* Müller
Kapitän 1./NSG 2	*Oblt.* Mundt
Kapitän 3./NSG 2	*Hptm.* Weber

No. 2911 from 3. Jagddivision, ... for NJG 2 ... on 25/12 [1944]:-

The Schwerpunkt of air ops must at present lie in the support of the operations of the Army in the West ...

For night g/a [ground attack] ops to support the Army there are constantly available to Jagdkorps II about one third of the available night fighter a/c in NJG 1, 2 and 4 ...

(A) For night g/a ops and night fighting employ crews with less than 5 victories, in the main former bomber crew members, and training Staffel crews trained in night flying. Night fighter key crews are to be kept back even in the event of major night G/A ops.

(B) A/c types: Bf 110 and Ju 88, if possible fitted for bombing. Employment of He 219 is forbidden.

(C) All a/c wireless apparatus except Bernhardine may be carried.

(D) In the case of a/c which are employed exclusively for night g/a the SN2 aerials and the components are to be dismantled. It is laid down as a principle that wireless data for night fighter ops may not be taken up. (Ultra Decrypt CX/MSS/T409/75)

In the Ardennes offensive NSG 20 the *Gruppe* marked German paratroops' drop zones and was commended by *Genmaj.* Peltz for the "masterly execution" of its attacks on 16–17 December. *Major* Dahlmann was awarded the Oak Leaves to his Knight's Cross for these and other feats since the invasion.

Ju 87 D-3 code D3+TL, 'White 11', of 3./NSG 2 over Poland during the summer of 1944. After the Gruppe arrived in Western Germany in September, such a flight in broad daylight would have been suicidal.

Orders for NSG 20

(1) Ops orders for the night 20-21/11 [1944]:
At once prepare for ops with all available forces, load with 20% incendiaries, 20% heavy SC without delayed action.
Remainder SD 250, fuses 55A and SD 10 and SD1.
The enemy has broken through at Geilenkirchen with 100 to 150 tanks. Ground situation very critical.

(Ultra Decrypt HP 7351)

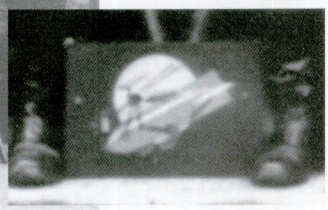
NSG 1 and 2 were also heavily engaged, particularly in trying to drive the Americans out of Bastogne and then in trying to hamper their relief. This concentration on a single target allowed RAF night fighters to claim several Ju 87s in the Christmas/New Year period. On 8 February 1945, Spitfires of No. 442 Squadron shot down five Ju 87s caught in daylight near Wesel. Worse followed on the night of 9–10 February when seven Fw 190 and 127 Ju 87 sorties were flown in bad weather: two Stukas collided on take-off, one was written off while landing and 10 succumbed to fuel shortage, Allied defences and unknown causes. The recently arrived 2./NSG 2 suffered particularly heavily, perhaps through its pilots inexperience.

The US Army's GRENADE offensive across the River Roer brought *Nachtschlacht* operations to a peak with 34 sorties by NSG 20, 95 by NSG 1 and 123 by NSG 2 on 24–25 February. The RAF commented on the month's activity that "on two or three occasions numerically strong night ground-attacks were delivered in the area west of Cologne. There is no evidence that these aircraft ... have improved the accuracy of their bombing." On 1–2 March, Ju 87 sorties again exceeded 200 and one was claimed by a P-61 of 422nd NFS. The American capture of the Remagen bridge forced NSG 1 to make a late afternoon attack in the face of heavy AA fire, ending with five Ju 87s missing and two crashed at base. On the 14th, P-47s caught 1. and 3./NSG 2 lining up for take-off from Lippe, leaving 24 Ju 87s burnt-out.

Nightly operations by NSG 1 and 2 continued although never again on the scale of late February/early March. They attacked US 3rd Army's Rhine crossing at Oppenheim on 23–24 March but reported next day that Allied bombing had closed their runways at Störmede (NSG 1) and Kirtorf (NSG 2).

Once the Allies crossed the Rhine, the two *Gruppen* were forced to change base frequently and NSG 1 was split, one element going north, the other south along with NSG 2. In the south on 4–5 April, 13 Ju 87s dropped 9 tonnes of bombs on targets around Würzburg; next night in the north nine attacked troops and tanks in the Stolzenau bridgehead. NSG 1 (Nord) was by now at Celle and Lüneburg, NSG 1 (Süd) at Gablingen; NSG 2 was at Kirchenlaibach and Adlholz. Both the RAF and USAAF caught Ju 87s in daylight in early April and the American night fighters started to encounter them more frequently too.

The men of 1./NSG 2 at Köln-Wahn airfield during December 1944. At their feet is a badge with a full moon and a mosquito (the insect, not the aircraft) carrying a lamp and riding on a bomb.



A detail of the photograph left showing the emblem of 1./NSG 2.

Luftwaffenkommando West: Morning Report: 24 March 1945

NSG 1: 50 Ju 87 from 21.54–03.00 making night attack on the Oppenheim bridgehead. Dive and glide attacks from 1000–200m with 250kg M.C. and S.C. bombs as well as armament on vehicle traffic on the roads and bridge in the Oppenheim area, on artillery, AA positions and on village outlets in the bridgehead. On the southern outskirts of Nierstein, fires and continuous explosions observed, other strong fires in Oppenheim area. 1 AA post out of action, several vehicles set on fire.
Successes in air combat: 1 Black Widow shot down.
Casualties: 1 a/c damaged; nil crew.

NSG 2: 9 Ju 87 in an attack on Nierstein from 00.25–01.53 dropped 10 x M.C. bombs, 15 x AB and 8 x light bombs. Most of the bombs fell on Nierstein and immediately west and east of the pontoon bridge. Low-level attacks were made on the bridge approach roads and on the road along the river bank to the north of Nierstein. Large fires in Nierstein observed.
Casualties: 1 a/c damaged; nil crew.

On 15 April, P-61 Black Widows of the 425th NFS pursued Stukas four times as they straffed US vehicles around Aschaffenburg but in every case the Germans were so slow that the Black Widows overshot. On 25 April, NSG 1 (*Süd*) was at Neubiberg with 11 Ju 87s and NSG 2 at Brunnenthal, Austria with 26.

Late in March, *Ltn.* Ottmar Schwendtmayer was one of a group of pilots transferred with no formalities from 3./JG 110 to 2./NSG 20 with whom they were to fly Bf 109s on night bombing sorties from Hagenow. On 29 April they operated over Berlin, on 1 May against the British bridgehead over the Elbe at Lauenburg, landing at Schleswig, their base for what remained of the war. By early April, the Bf 109s of 7./NJG 11 at Köthen were also operating in the ground-attack role, as were parts of the *Geshwader* in Bavaria. On 2–3 May NSG 20 operated at twilight with 16 Fw 190s and six Bf 109s against traffic on roads running north from Lauenburg, posting three Focke-Wulfs missing. The same night, 10 Bf 109s of 7./NJG 11 strafed supply traffic, troop concentrations and bivouacs before transferring to Leck, where the *Staffel* ended the war with 25 aircraft on strength. Schwendtmayer's last mission was from 2030–2200 hours on 4 May, dropping an SD 250 on the Hamburg–Lübeck Autobahn.

NSG 1 (Nord)'s last mission was on 3–4 May: bombing and strafing vehicle columns in the area Bad Segeberg–Oldesloe–Lüneburg. At dawn on 2 May, 12 of the *Gruppe's* Ju 87s had made their final change of base, from Schwerin to Husum and on the 6th the unit's strength there was reported as 18 Ju 87s and 19 Ar 96s (presumably commandeered in the final days). Last-minute orders to retreat to Norway were never carried out.

Major Robert Rohn, became Kommandeur of NSG 2 in February 1945. In March he was accidentally shot and killed by a Hitler Youth sentry while inspecting a new landing ground.

Köln, February 1944. The men of 1./NSG 2 collect their remaining possessions after their barracks were damaged by Allied bombing.

Ju 87 D-5 W.Nr. 131372, V8+KD of 3./NSG 1. Thirty per cent damaged by a night fighter on 24 February 1945; one month later it lay completely wrecked on the scrap heap at Bonn-Hangelar aerodrome.

Celle on 14 April 1945. Riddled with bullets or fragments and with its back broken, a Ju 87 D-5 of NSG 1 - W.Nr. 140452 , V8+B. According to an intelligence report, the fourth letter of the aircraft's tactical code had not been applied. The second Ju 87 wreck is W.Nr. 31489, 'White 16' lacking the characteristic exhaust flame dampers carried in the West by aircraft of the Nachtschlachtgruppen. Behind that is W.Nr. 31115. In the foreground one can see the twin MG 151/20 Schräge Musik cannon installation in the upper rear fuselage of a Ju 88G night fighter.

Although this photograph does not depict an aircraft from NSG 1 or NSG 2, it offers a good colour representation of the Ju 87s deployed in the Nachtschlacht role. The aircraft shown here is a Ju 87 G-2, W.Nr. 494200, fitted with flame dampers to the engine exhausts similar to those in NSG 1 and 2. This would suggest that the aircraft might originally have been operated by an NSG unit and converted in the field to carry two 37 mm BK 3.7 cannon under the wings for use as a tank-buster. Although the unit has not been identified positively, the machine was captured and photographed in Pilsen, Czechoslovakia by US troops in May 1945. The 50 cm wide yellow band around the nose and the yellow rudder were standard identification markings for aircraft operating under Luftflotte 4 as laid down in a IV. Fliegerkorps' directive dated 6 March 1945 which replaced the yellow 'V' under the wing and the fuselage band. With these markings the aircraft could have belonged to 10.(Pz)/SG 2, but carrying out low-level attacks at around 50 metres against tanks at dusk and in darkness would have been an extremely hazardous exercise for the crew.

Toward the end of April 1945, NSG 1 was split in two parts, one at Husum near the Danish border and the other at Neubiberg near Munich. The last known operation by NSG 1 took place during the night 3/4 May. These two photos show Ju 87 D-5, W.Nr. 142103 V8+TD at Neubiberg after the war. The unit markings of 3./NSG 1 are clearly visible. This aircraft had been transferred from Celle to NSG 1's operational base at Kirchellen, on the morning of 24 December.

Two photographs of Ju 87D-5 W.Nr. 140736 , V8+JB of 1./NSG 1, after its capture along with other Luftwaffe aircraft at Wunsdorf aerodrome on 7 April 1945 by the British 5th Parachute Brigade. Of note are the absence of dive brakes, a white "J" on the starboard wheel spat and a Balkenkreuz under the wing. The aircraft appears to have suffered a localised fire to the rear of the engine on the starboard side (below) with just scorching to the port cowling in the above photo. In the background is a Junkers Ju 88A-4 F1+EU of III./Erg. KG 1.

The Bücker Bü 181 Panzerjagdstaffeln

by Robert Forsyth

In the closing weeks of the Second World War, a substantial number of Bücker Bü 181 *Bestmann* basic trainers were modified to carry *Panzerfaust* infantry anti-tank missiles with the aim of subsequent deployment by the *Luftwaffe* in the anti-tank role in a last-ditch attempt to stem the advance of Allied armour into Germany.

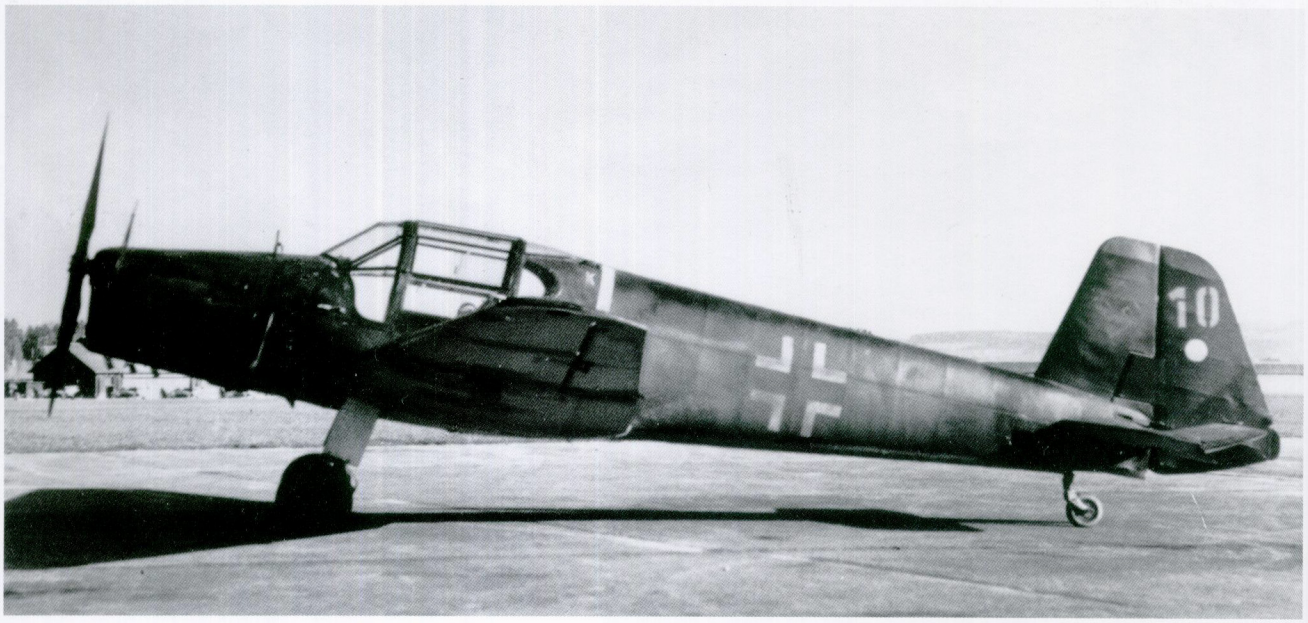
Although it has remained unclear as to exactly with whom the quite improbable idea of fitting *Panzerfaust* to Bü 181s originated, it is believed that *Oberst* Adolf Dickfeld, the *General für Nachwuchs Luftwaffe* (General Commanding *Luftwaffe* Personnel under Training) and *Reichsinspekteur der Flieger-Hitler Jugend* (*Reich* Inspector of Hitler Youth Fliers), was responsible for organising the training of pilots to fly the Bücker in the anti-tank role and for the formation of the so-called *Panzerjagdstaffeln* – 'Tank Hunting Squadrons' – which operated them in southern Germany during the latter half of April 1945.

The first trials were carried out at the NSFK *Reichssegelflugschule* (National Socialist Flying Corps State Glider School) at Trebbin, some 35 km south of Berlin probably around mid-March 1945. Three Bückers known to have been assigned to the *Panzerjagd* force were 'RL+EY', 'SU+QN' and 'PN+BN'. Shortly after the trials, an appeal was put out for pilots to fly light aircraft in the ground-attack role, with a stipulation that all volunteers were to have considerable experience in both low-altitude flying and aerobatics! This resulted – not surprisingly – in a nucleus of volunteer pilots at Trebbin who were predominantly flying school instructors or members of the aircrew pool, *Frontfliegersammelgruppe Quedlinburg*.

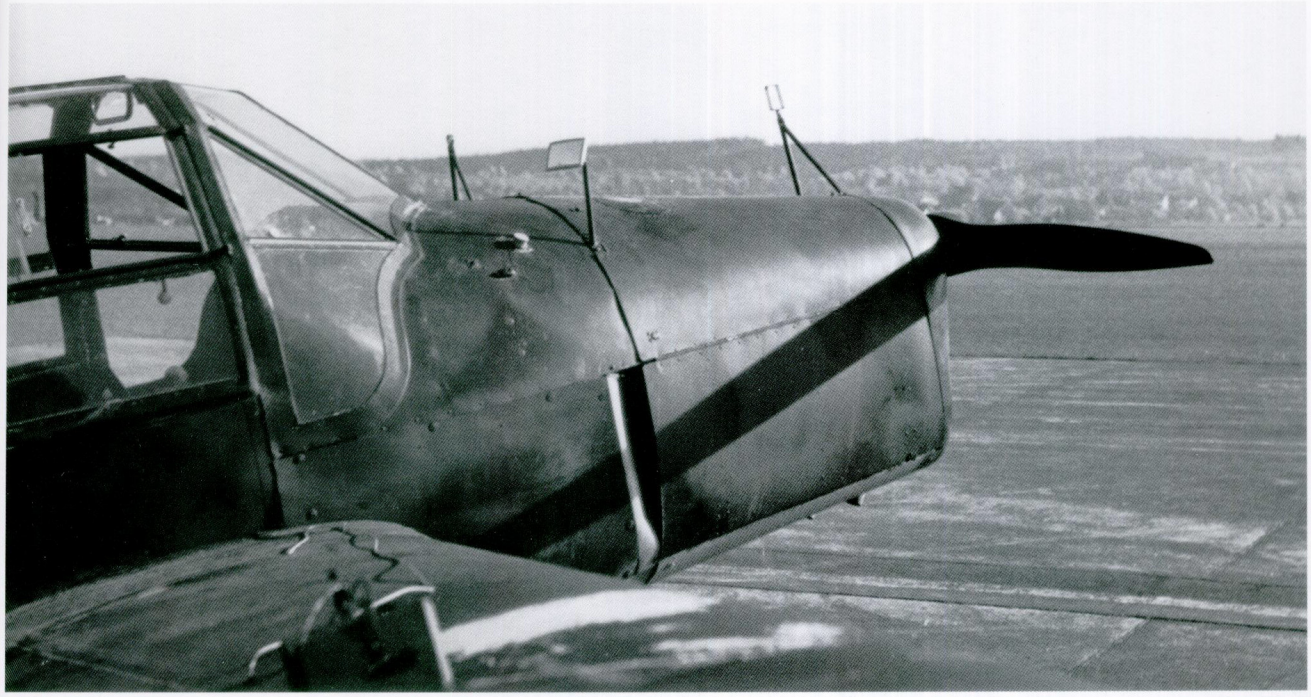
Oberst Adolf Dickfeld, (seen here right, standing next to Generalleutnant Adolf Galland during a flying demonstration) was a holder of the Oakleaves to the Ritterkreuz, a former Gruppenkommandeur of II./JG 11 and a 136-victory fighter ace. He was appointed General für Nachwuchs and Reichsinspekteur der Flieger-Hitler Jugend in the autumn of 1944 and it was in this capacity that he is believed to have played a central part in organising the formation of the Panzerjagdstaffeln. To Galland's right is Generaloberst Alfred Keller, the Korpsführer of the NSFK, who was also involved in the formation of a Panzerjagdkommando at Trebbin in April 1945.

Training consisted of a number of familiarisation flights in which the firing of the projectiles was practised, concluding with three or four live-firing runs. For the final phase of training, the Bü 181s were fitted with four *Panzerfaust* 100m missiles, one mounted above and below each wing at about mid-span, positioned in a five-degree nose-up attitude on makeshift wing racks. As an infantry weapon, the *Panzerfaust* was a very simple design weighing 5-10 kg and formed of a tube of low-grade steel, approximately a metre long and 4-6 cm in diameter. Attached to the upper side of the tube were a rudimentary rear sight and trigger. There was no front sight and the edge of the warhead was used. Inside the tube was a small charge of black powder for propellant. Fitted to the front of the tube by its wooden tail stem and metal fins was an oversized hollow-charge warhead, 15 cm in diameter and weighing 3 kg. It contained around 800 grams of explosive. The *Panzerfaust* 100m was the final version produced in quantity from November 1944 onwards. It had a nominal maximum range of 100 metres. Some 190 g of propellant launched the warhead at 60 metres per second from a 6 cm diameter tube. This version weighed 6.8 kg. The missiles were armed prior to flight and were aimed by means of two crude sights mounted on the fuselage of a Bü 181's engine cowling, one offset to port and the other aligned with the centre of the pilot's windscreen.

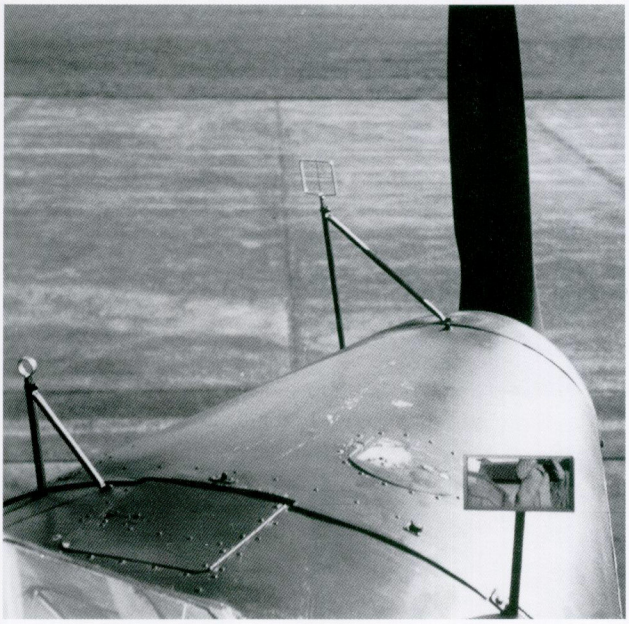
Many Bückers adapted to carry *Panzerfaust* had 50 cm x 50 cm metal plates fitted to both sides of the fuselage directly aft of the cockpit as a measure of resistance against blast and fire when the missiles were launched.



Bücker Bü 181 C-2, W.Nr. 502 167, of the 3. Panzerjagdstaffel based at Kaufbeuren in April 1945. The aircraft is photographed here at Zurich-Dubendorf having had its Panzerfaust wing racks removed and shortly after being flown to Switzerland on 18 April 1945 by its defecting crew, Uffz. Hans Ficker and Uffz. Werner Diermayer. Note the firing sights fitted to the top of the cowling. The aircraft has received a 'light' overspray to its national markings and codes in an attempt to tone them down.



More views of Bücker Bü 181 C-2, W.Nr. 502 167, of the 3. Panzerjagdstaffel which defected to Switzerland on 18 April 1945. Note left and below left, the pilot's sights on the port side of the cowling and the observer's rear view mirror mounted on a stalk on the starboard side of the cowling. This was no doubt needed to improve the poor rear view, whilst on operations. Also observe left, the trigger cabling running from the Panzerfaust mount on the upper wing to the cockpit side. Note the random 'light' overspray applied over the original camouflage.

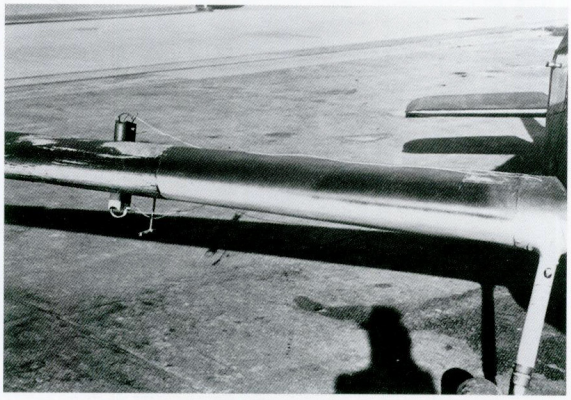


A view into the cockpit of the defected Bücker showing the simple trigger cabling for the four wing-mounted Panzerfaust. The observer who sat in the right-hand seat fired all four at once by simply pulling on this cable.

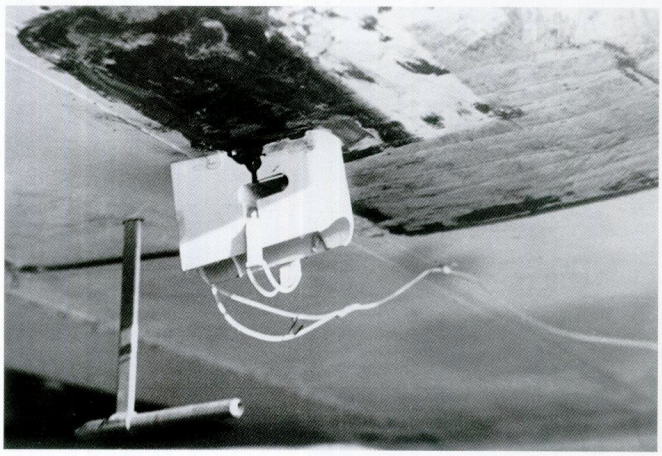
On 2 April 1945, orders were issued for the establishment of a number of *Panzerjagdstaffeln*. By the end of the first week of April, sufficient personnel had been trained to form three operational units – the 1., 2., and 3. *Panzerjagdstaffeln*. 1. and 2. *Staffeln* are believed to have been assigned to *Luftflotte Reich* possibly operating in association with the *Panzerjagdkommando Generaloberst Keller* which was formed at Trebbin in April 1945 on the initiative of Alfred Keller, the NSFK *Korpsführer* with personnel drawn from the *Flieger-Hitler-Jugend*. *Luftflotte Reich* assigned radio operators for the *Panzerjagdstaffeln* to the airfields at Crailsheim, Perleberg, Göppingen, Gablingen, Straubing, Braunschweig-Broitzem and Weimar-Nohra.

Additionally, a '1. *Tiefangriffsgruppe Bücker 181'* under the command of *Hptm*. Hubert Jennes formed up in March 1945 in the Wittenberge area, south of Berlin, but whether this was, in fact, an alternative name for 1. *Panzerjagdstaffel* remains unclear. Whatever the case, it is believed that this unit operated in the north of Germany, was formed with a strength of 10-12 Bü 181s and operated under attachment to the reconnaissance unit, NAG 8.

The 3. *Panzerjagdstaffel* was formed under the command of *Oblt*. Karl-Heinz Dragenscheck at Kaufbeuren im Allgäu, the home of FFS A/B 23, sometime around 7 April 1945. The crews consisted mainly of former instructors from the school. The airspace over Kaufbeuren airfield, situated about 30 km south-west of Landsberg, was still relatively free of American fighters and, to the benefit of the training programme, it possessed a large number of Bü 181 trainers. Training started in earnest on 14 April, with the cadre personnel, who had largely been recruited from the instructor staffs of various flying schools including FFS A/B 23, flying several ten minute familiarisation flights with new volunteer pilots.



A Bücker Bü 181 fitted with two wing-mounted Panzerfaust 100m anti-tank missiles. The Panzerfaust were positioned in a five-degree nose-up attitude and launched from makeshift racks fitted at a central point on the wing. It is believed that some 150-170 Bü 181 trainers were converted to such a configuration.

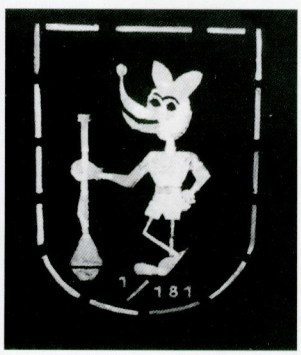


Above and left: A view of the upper and lower wing mounts and a close-up of the Panzerfaust firing cable, which trailed from the cockpit across the top and underside wing surfaces of the Bücker. It is seen here on the machine which defected to Switzerland on 18 April 1945.

Bücker Bü 181, W.Nr. 201236, code SK+WQ, 3. Panzerjagdstaffel, Kaufbeuren, April 1945
This Bücker was piloted by Ofw. Alfred Buchsteiner and co-pilot Fw. Diebl. Finished in standard 70/71 with 65 undersurfaces, SK+WQ has typical late war fuselage Balkenkreuz in white as well as the upper wing, with a white outline Hakenkreuz on the fin with the last three digits of the Werknummer in white. The lower wing Balkenkreuz are black and white, but without the mid-war black edging. The fuselage codes which are black with a thin white outline are based on existing photographs of other production Bückers in the 'SK' code series which are black with white outlines.

Above and below: Two views of either side of a Bü 181 of 1. Tiefangriffsgruppe Bücker 181 photographed in March or April 1945. Both views show single Panzerfaust fitted to racks mounted on to the upper and lower surfaces of each wing. The photograph above shows Oblt. Loesener; note also the crude site arrangement on top of the cowling. The photograph to the left shows a pilot NCO in a flight suit, Ofw. Paetzsch.

Above: Two pilot NCOs of 1. Tiefangriffsgruppe Bücker 181 pose by one of the unit's Bü 181s in March or April 1945. Evident is the primitive nature of the landing ground and another Bücker just visible in the background. At least one of 1. TAG Bü 181's aircraft was adorned with the unit's emblem depicting a crudely-painted Mickey Mouse figure holding a Panzerfaust. The designation '1./181' appears below the Mickey Mouse.



Bücker Bü 181 C-2, W.Nr. 502 167, formerly of the 3. Panzerjagdstaffel which defected to Switzerland on 18 April 1945. In this photograph it has been painted in the distinctive colours of its 'new owners', the Swiss Air Force which coded the aircraft 'A-254' and used it as a training and liaison machine until 1 January 1956.

On 11 April, 8. *Panzerjagdstaffel* is known to have been based at Magdeburg-Süd with 12 aircraft and 22 pilots on strength, while the commander of 6. *Panzerjagdstaffel*, also at Kaufbeuren, reported that the strength of his *Staffel* was 'complete' with the 3. *Panzerjagdstaffel* reporting that the unit's strength was 'almost complete' and its aircraft being re-equipped. However, the *Kommandeur für Schlachtfliegerarbeitsstab* (Commander for Ground-Attack Planning Staff South) placed an urgent request with *Luftgau* VII for 'recoilless anti-tank grenades' so that the training of the Bü 181 anti-tank pilots could commence.

On 18 April, 10. and 11. *Panzerjagdstaffel* arrived at Straubing, the former with 30 aircraft, while the latter was ordered to disband and surrender its aircraft and personnel to 10. *Staffel*. The 10. *Staffel* then moved immediately to Münsteür for assignment to *Luftwaffenkommando* 4. The same day, '1. *Tiefangriffsgruppe Bücker 181'* transferred for operations to Finow and flew its first mission the following day in the Werneuchen/Müncheberg/Wriezen area. One crew did not return.

Despite the *Panzerjagdstaffeln's* apparent departure from Straubing, one eyewitness who was working on the extension of the runway there in April 1945 in order to prepare for the planned operations by the Me 262s of KG(J) 55, recalled 'four or five Bü 181s daily' making target practice flights and low-level flights around the airfield, before the field was destroyed in the face of advancing American forces on 25 April.

Meanwhile, the pilots assigned to 3. *Panzerjagdstaffel* at Kaufbeuren were paired off as crews and allocated a particular aircraft. One of the unit's pilots, *Ofw.* Alfred Buchsteiner, a former instructor, was joined by a *Fw.* Diebl as his co-pilot and assigned Bü 181 'SK+WQ'(see profile page 92). The job of the co-pilot was to navigate and, in some cases, fire the *Panzerfaust*.

There was a notable event on the evening of 18 April when, following live-firing practice close to Kaufbeuren airfield, *Uffz.* Hans Ficker and *Uffz.* Werner Diermayer, both of whom had been NCO flying instructors at LKS 4 *Fürstenfeldbrück*, decided to 'borrow' one of the 3. *Panzerjagdstaffel's* Bückers in order to make a dash to neutral Switzerland and the relative comforts of internment. Four Bü 181s had been prepared for flying, but not armed, when at around 1900 hours the alarm was sounded for an imminent Allied air raid. The refuelled Bü 181s were hurriedly pushed back into a hangar, the doors to which were left open, while the unit's personnel quickly made for emergency shelters. Amidst the confusion, it seems the two crewmen had secreted themselves inside the hangar. Seconds later Alfred Buchsteiner, who was among those taking shelter, recalled hearing the 'howl of an engine' but thought it came from an aircraft coming in to land and taking off again. It was only after the 'all clear' had sounded that the members of the unit realised that the two NCOs had 'stolen' the Bücker closest to the open hangar doors – W.Nr. 502167, 'Yellow 10'.

Having crossed the Swiss border south of Bregenz in darkness, they made course for Zurich and taking a bearing on the bright lights of the city on the River Limmat, they spotted the landing lights of Zurich-Dubendorf airfield where they landed at 2057 hours after a 90 minute flight. The Bü 181 C-2 was impounded and later served with the Swiss Air Force after the removal of its *Panzerfaust* mountings.

The tactics required for delivering the *Panzerfaust* missiles called for extremely low flying both to, and from, the target at maximum speed. Having selected his target, the pilot would, at a distance of approximately 500 metres, pull up his aircraft to a height of 20-30 metres and go into a shallow dive. Then at a distance of 150-200 metres from the target, all the projectiles would be fired at once by means of a cable situated between the pilot's and co-pilot's seats. At a speed of around 205 km/h, at a maximum distance of 200 metres from the target, the pilot would then have to take abrupt evasive action to avoid flying into the explosions caused by the missiles. This was achieved by standing the nimble Bücker on its wing tip and performing the tightest of turns. Such a manoeuvre enabled a quick escape over the hedgerows before an unsuspecting enemy knew what had hit him.

The 8. *Panzerjagdstaffel* flew its first mission on either 11 or 12 April, during which one aircraft was hit by ground fire and was forced to land, whereupon it blew up from the detonation of its missiles. Franz Florian Winter had been an instructor with JG 101 at Stolp-Reiz and II./JG 108 at Wiener-Neustadt before joining 8. *Panzerjagdstaffel* on 9 April; he recalls that – unlike most other units – his unit's Bückers carried only one *Panzerfaust* beneath each wing, but none on the upper side of the wing.

A column of motor vehicles forming the support detachment of the 3. Panzerjagdstaffel burn on a country road somewhere in southern Germany on 26 April 1945 following an attack by American fighters. This photograph was taken moments after the attack by a member of the detachment.

Winter recorded: "Together with an *Unteroffizier*, I received my first operational order on 13 April 1945. We flew to the Halberstadt area, not at dawn or dusk, but rather at around 1400 hours. We flew just over the grass and over the American advanced tank units, since there was no longer any front line. Over Klein Oschersleben we were jumped on by enemy fighters and there was an 'unequal' air battle. We were shot down. My comrade crashed on a meadow west of Klein Oschersleben. My machine smashed into a small coppice. I was trapped for 30 minutes, naturally in mortal anguish, because I thought that at any moment, the aircraft would go up in flames. I was hauled from the machine by two Polish women, who were working in Klein Oschersleben and the local priest, *Herr* Peus, took me to his presbytery and hid me from the Americans, who, that very day had occupied the town. I was then able to recover from my minor war wound (a fractured shin). At no time did the Americans search the presbytery, although they eagerly searched for me, the pilot of the second machine they had shot down."

The 3. *Panzerjagdstaffel*, comprising 12 *Panzerfaust*-equipped Bü 181s, finally deployed from Kaufbeuren to Ringingen on 19 April 1945. It flew one of its first missions against American vehicle convoys in the Tübingen area that evening, taking off at 2020 hours and returning at 2050 hours. Although no tanks were destroyed, the six Bückers which participated in the attack were able to account for a small number of trucks. No losses were suffered by the Germans, but at least two of their aircraft received light damage from the surprised crew of an American anti-aircraft gun.

To the north, on 20 April, *Hptm.* Jennes and *Ofhr.* Peter Rambausek of '1. *Tiefangriffsgruppe Bücker 181'* were reportedly hit by infantry fire during an early morning mission and were forced to land in an open field. They were picked up by German troops and were able to return to their base at Finow where Rambausek and another *Fahnenjunker-Unteroffizier* promptly took command of another Bü 181.

So as to maintain the element of surprise, and to afford the attacking aircraft the best measure of protection from Allied fighters, the Bü 181s did mainly strike at dawn and dusk. During the day they remained hidden safely in trees at the edges of their landing grounds. By changing their locations virtually every day, the aircraft of 3. *Panzerjagdstaffel* remained undetected until the end of the war and were never once caught out in the open. This meant that their crews frequently spent cold and uncomfortable nights either in – or under – their aircraft since the unit's supporting supply vehicles often failed to find the unit before it left for its next landing site.

One of 3. *Staffel's* last missions was undertaken during the early hours of 24 April from a small field near Immenhofen, close to Kaufbeuren. Some eight Bü 181s took part in the operation, the aim of which was perhaps indicative of a nation in defeat. The target on this particular day was abandoned *Wehrmacht* vehicles and *Luftwaffe* aircraft which may have held documents or other items of importance. In what was to be the last mission of his operational career, *Ofw.* Buchsteiner, for example, apparently attacked a stranded Heinkel He 111 which had been abandoned by its crew in a meadow near Memmingen airfield.

However, as late as 29 April, the Bückers were known to be operating; at dusk that day, a column of 'soft-skinned' vehicles from the US 10th Armoured Division was advancing in the vicinity of the airfield at Schöngau. According to the Divisional history: '*... three light German planes took off from the field and flew*

The remote ski hut on the slopes of the Eggenalm, south-east of Rosenheim, close to the Austrian border, where the surviving members of the 3. Panzerjagdstaffel sought refuge before surrendering to American troops on 9 May 1945.

over the column, dropping Panzerfausts as bombs. One hit dangerously near "Red" Hankins' vehicle and blew off his right rear tire. Fortunately, none of the occupants were injured when they were thrown from the jeep.'

Panzerfaust-equipped Bü 181s received a special word of gratitude from XIII. SS-*Armeekorps* during fierce fighting against elements of the US 12th Armored Division near Nördlingen, Bavaria, in late April. In one report, SS commanders reported *Luftwaffe* '*... light aircraft provisionally fitted with Panzerfaust under their wings*' that effectively came to their aid by carrying out daily, low-level attacks at both dusk and dawn. These attacks, which were aimed at American tanks and convoys, are described as '*...tireless and courageous*' and were led by an *Oblt.* von Schröder. The attacking Bückers were incorrectly identified as Bücker *Jungmeister* in the report, but there is no doubt that they were Bü 181s, possibly from 3. *Panzerjagdstaffel.*

One of 3.*Panzerjagdstaffel*'s very few write-offs was a Bü 181 which flew into telegraph wires after returning from the Memmingen operation. The aircraft was so badly damaged that it was decided to leave it at Immenhofen until a salvage unit from Kaufbeuren could retrieve it. This, however, did not happen and parts of this aircraft were rediscovered in the attic of a nearby farmer's barn as late as 1982.

No information has been found on the activities of 9. *Panzerjagdstaffel* (thought to have operated under *Luftflotte Reich*), 11. *Panzerjagdstaffel* (thought to have operated under *Luftflotte* 6) or 12. *Panzerjagdstaffel*, but of the other *Staffeln* it is known that on 24 April, 4., 6. and 7. *Panzerjagdstaffeln* were reported to be in the Ulm area, having recently operated in the West, while 5. *Panzerjagdstaffel* was at Gablingen. The 10. *Panzerjagdstaffel* was reported to be at Straubing – evidently having returned from Münsteür – and was expected to be operational within three days with orders to transfer to Prien. On 22 April, the '1. *Tiefangriffsgruppe Bücker 181'* (possibly 1. *Panzerjagdstaffel*), began a retreat from Finow, firstly to Perleberg during which the unit's ground crew sustained heavy losses from air attack. It then transferred to Parchim, then to Ludwigslust, then to Eggebek/Tarp where it halted.

In total it is believed that some 150-170 Bü 181 trainers were converted to carry the *Panzerfaust.*

The '1. *Tiefangriffsgruppe Bücker 181'* was disbanded at Eggebek/Tarp with 5-6 aircraft on strength. On 4 May 1945, the 3. *Panzerjagdstaffel* was disbanded at Reit-im-Winkel, some 30 km south-east of Rosenheim, close to the Austrian border. Its personnel sought refuge in a ski hut on the slopes of the Eggenalm.

On 7 May, in what was probably the last official mention of the Bücker-equipped *Panzerfaust* units, the *Luftwaffe* Quartermaster General reported that a '*Behelfs-Panzer-Schlachtkommando*' (Auxiliary Anti-Tank Detachment) was based at Gasteig, near St. Johann, with four Bü 181s on strength. The 3. *Panzerjagdstaffel* finally surrendered to the US Army in Reit-im-Winkel on 9 May. The unit's surviving aircraft remained on the local glider field for some time after the war and provided a ready-made playground for local children until they were eventually carted away to the scrapyard.